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BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

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MONTHLY LABOR REVIEW

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MONTHLY LABOR REVIEW

VOL. X—NO. 1 10-27-20 WASHINGTON

JANUARY, 1920

The International Labor Conference.¹

By MRS. V. B. TURNER.

THE first world labor conference was in session in Washington from October 29 to November 29, 1919. Called in accordance with the provisions of the labor convention in the Peace Treaty, and meeting in the Pan American Building, which is dedicated to the cause of Pan American peace and progress, the conference had a definite purpose—the adoption of measures looking toward the promotion of industrial peace, without which no national peace is really possible.

In welcoming the delegates Hon. William B. Wilson, United States Secretary of Labor, emphasized the fact that since the days of "Moses, as the spokesman, the angel, the walking delegate, of the brick makers of Israel, until the present time, the relationship that should exist between employers and employees, the best means of securing the acme of production while safeguarding those who toil, and the equitable distribution of that which has been produced, have been ever present questions." The proper solution of these problems, upon which the progress of the world depends, he continued, must include the spiritual nature of man as well as his material comfort, and can not be arrived at hastily. Universal justice and harmony are not to be achieved overnight. The slow process of experimentation must be followed, in which the bad must be rejected, the good retained, and all so adapted that nothing could occur that would "destroy the basis of the structure of modern civilization, the democratic institutions that exist in numerous nations of the world; for after all, of what avail the plow, the sail, or land or light or life, if freedom fail?"

¹This article was prepared for insertion in the December issue of the MONTHLY LABOR REVIEW, but the conference had not adjourned when the December issue went to press, and it was thought advisable to hold the article for the present number. In the meantime a copy was given to the conference, which had it mimeographed for general circulation.

The full text of the draft conventions and recommendations adopted by the International Conference will be published in the February issue of the MONTHLY LABOR REVIEW.

Preliminary to the permanent organization of the conference the report of the international organizing committee was presented for adoption. This committee, appointed to assist the Government of the United States of America in making necessary arrangements for the International Labor Conference, consisted of seven members, appointed by the United States of America, Great Britain, France, Italy, Japan, Belgium, and Switzerland, as follows:

United States of America: Dr. J. T. Shotwell (provisionally), professor at Columbia University.

Great Britain: Sir Malcolm Delevingne, K. C. B., Assistant Under-Secretary of State, Home Office.

France: Mr. Arthur Fontaine, Councillor of State, Director of Labor.

Italy: Mr. di Palma Castiglione, Inspector of Emigration.

Japan: Dr. M. Oka, formerly Director of Commercial and Industrial Affairs at the Ministry of Agriculture and Commerce.

Belgium: Mr. E. Mahaim, professor at Liège University.

Switzerland: Mr. W. E. Rappard (provisionally), professor at Geneva University.

Mr. Arthur Fontaine, Director of the Labor Department of the French Ministry of Labor, had been elected chairman of the committee, and Mr. H. B. Butler, Assistant Secretary of the British Ministry of Labor, had been appointed secretary. The agenda for discussion and action by the conference, as set forth in the annex to the labor convention included in the Peace Treaty, embraced the following subjects:

1. Application of the principle of the 8-hour day or of the 48-hour week.
2. Question of preventing or providing against unemployment.
3. Women's employment:
 - (a) Before and after childbirth, including the question of maternity benefit.
 - (b) During the night.
 - (c) In unhealthy processes.
4. Employment of children:
 - (a) Minimum age of employment.
 - (b) During the night.
 - (c) In unhealthy processes.
5. Extension and application of the international convention adopted at Bern in 1906, on the prohibition of night work for women employed in industry, and the prohibition of the use of white phosphorus in the manufacture of matches.

The committee's report pointed out that the conference would also have to deal (1) with the appointment of the governing body of the International Labor Office, and (2) the approval of rules of procedure.

Through a questionnaire sent out to the different countries, information was secured regarding existing legislation and practice in respect to the various subjects enumerated in the agenda, together with proposals from the respective Governments as to how these

subjects should be dealt with in the conference. Upon the information thus obtained the organizing committee based the suggestions for draft conventions and recommendations which it submitted to the conference, in the form of four reports, as a basis of discussion.

The Make-Up of the Conference.

According to the terms of the labor convention in the Peace Treaty each State adhering to the convention is entitled to four delegates in the International Labor Conference, two of these delegates to be appointed by the Government, one by the employers' organizations, and one by the workers' organizations. "Each delegate may be accompanied by advisers, who shall not exceed two in number for each item on the agenda of the meeting. When questions specially affecting women are to be considered by the conference, one at least of the advisers should be a woman." The non-Government delegates and advisers are to be chosen from the most representative employers' and workers' organizations, if such exist, in their respective countries.

While all the delegations at the conference were not as complete as possible under the labor convention, a number of the countries had full representation, chief among which were Belgium, Canada, Czecho-Slovakia, Denmark, France, Great Britain, Italy, Japan, Netherlands, Norway, Poland, Spain, and Sweden. Fourteen of the 40 countries represented sent only Government delegates, for reasons temporary in their nature, as explained to the conference.

Through the failure of the United States Senate to ratify the Peace Treaty, the United States was not entitled to official representation in the labor conference except through the courtesy of the visiting delegates, and this courtesy was promptly extended. In a motion introduced by Baron Mayor des Planches, Government delegate from Italy, and unanimously adopted by the conference, the United States employers and workers were requested to send delegates. Mr. Samuel Gompers was appointed to represent labor. The employers did not send a representative. Delegates from the United States, however, did not have the privilege of voting.

On the question of the admission of the German and Austrian delegates the organizing committee recommended "that in anticipation of their admission to the League of Nations and in view of their expressed willingness to cooperate in the work of the labor organization, Germany and Austria are hereby admitted to membership in the international labor organization with the same rights and obligations possessed by the other members of the labor organization,

according to the terms of the treaties of peace signed at Versailles on the 28th day of June, 1919, and at St. Germain on the 10th day of September, 1919."

Opinions on such admission, unfavorable and favorable, were freely expressed. It was argued, on the one hand, that the war history of the countries in question precluded their joining with the Allied peoples on the same basis; while, on the other hand, it was pointed out that if legislation were adopted enforcing the 8-hour day or the 48-hour week, Germany and Austria could not possibly be expected to apply such legislation if they had not been invited to join in the proceedings. Again, it was suggested that if admitted to the labor organization there would also be lacking opportunity for these countries to injure industrial interests of other countries. Economic reasons eventually prevailed and the recommendation was adopted. Owing, however, to a delay in obtaining passage and the unexpected brevity of the conference the German and Austrian delegates did not come to the United States.

It is interesting to note that the delegate representing the French employers voted against the recommendation and the delegate representing Belgian employers abstained from voting, while the Government and labor delegates from those nations voted in favor of it.

Delegates were present from the following 40 countries: Argentina, Belgium, Bolivia, Brazil, Canada, Chile, China, Columbia, Cuba, Czecho-Slovakia, Denmark, Ecuador, Finland, France, Great Britain, Greece, Guatemala, Haiti, India, Italy, Japan, Netherlands, Nicaragua, Norway, Panama, Paraguay, Persia, Peru, Poland, Portugal, Roumania, Siam, Salvador, South Africa, Spain, Sweden, Switzerland, Uruguay, and Venezuela, and Serbs, Croats, and Slovenes. Among these delegates were 19 women, who represented their various countries in the capacity of advisers. On several occasions, as substitutes for regular delegates, they addressed the conference on subjects pertaining to the employment of women and children.

Organization of the Conference.

Permanent organization was not effected until October 31, 1919, when Hon. William B. Wilson, United States Secretary of Labor, was made president of the conference. Secretary Wilson voiced his appreciation of the honor conferred upon the American Government and the American people through this courtesy to him, and re-emphasized a thought to which he had given expression in his opening address, as follows:

Mankind has had two great economic problems to solve. The first of these problems was the problem of production, the means of producing suf-

ficient by which the material comfort of the people of the world might be secured. The inventive genius of man has solved that question to a very great extent. There is no longer any fear that the people of the world can not produce sufficient to provide for the material comfort of all that may be born into it, provided there is ample opportunity to work under proper safeguards, and that the things that are produced are equitably and justly distributed.

If we can solve the question of giving to all the people an opportunity for employment under proper safeguards and secure the equitable distribution of that which is produced we will have achieved the greatest material ideals that have been conceived in the human mind. To the solution of these problems you are bringing your wisdom and your experience, but the problems will not be solved as the result of the brilliant conceptions of any one mind. The problems of production and the other problems that man has solved have been solved by the process of adding one idea to another, building the structure one stone upon another until it is completed. That is the task now before the International Labor Conference—the task of finding the material and fitting it into its proper place in the structure.

Right Hon. G. N. Barnes, member of the British War Cabinet, for the Government representatives, Mr. Jules Carlier (Belgium), representing the employers' group, and Mr. Léon Jouhaux, secretary of the General Confederation of Labor, France, representing the workers' delegates, were elected vice presidents, while Mr. H. B. Butler was made secretary general. A committee of selection (or steering committee) was named from the three groups as follows:

Government Delegates.

Sir Malcolm Delevingne, Great Britain; Dr. Felipe Espil, Argentina; Mr. Arthur Fontaine, France; Mr. E. Mahaim, Belgium; Dr. S. Neumann, Denmark; Mr. M. Oka, Japan; Mr. di Palma Castiglione, Italy; Dr. Adolfo Posada, Spain; Hon. Gideon D. Robertson, Canada; Mr. Charles Spinka, Czecho-Slovakia; and Dr. Hans Sulzer, Switzerland.

Employers' Delegates.

Mr. Francis X. Hodacz, Czecho-Slovakia; Mr. Louis Guérin, France; Mr. D. S. Marjoribanks, Great Britain; Mr. Ferdinando Quartieri, Italy; Mr. Sanji Muto, Japan; and Mr. Alfonso Sala, Spain.

Workers' Delegates.

Mr. Corneille Mertens, Belgium; Mr. Léon Jouhaux, France; Mr. G. H. Stuart-Bunning, Great Britain; Mr. J. Oudegeest, Netherlands; Mr. Francisco L. Caballero, Spain; Mr. H. Lindqvist, Sweden.

Committees to confer and report on various parts of the agenda, a committee on standing orders, and one on admissions were nom-

inated by this committee and afterwards approved by the conference.

Program of the Conference.

The 8-Hour Day.

The question of the 8-hour day or 48-hour week, the first item of the agenda, was presented to the conference by the Hon. G. N. Barnes, Government representative from Great Britain, who moved "that the draft convention on the 48-hour week prepared by the organizing committee be adopted by the conference as the basis for discussion, but that the question of its application to the tropical and other countries referred to in the third paragraph of article 405 of the treaty be referred in the first instance for consideration by the special committee which shall report to the conference."

The organizing committee suggested the principle of the 48-hour week instead of the 8-hour day for two reasons:

1. Greater elasticity is possible in the arrangement of the hours of work and the adoption of a half holiday, or even a whole holiday, on Saturday or some other day of the week, by enabling a longer period than 8 hours to be worked on other days;

2. The weekly day of rest is possible through the 48-hour week, whereas the principle of the 8-hour day by itself would not necessarily help to secure this rest period.

In his argument for the 48-hour week Mr. Barnes emphasized the fact that while increased production must be had, it could be secured only through a better organization of industry, by humanizing the conditions of labor. Long hours of labor would not, in his opinion, contribute to that end. The basic 8-hour day would not give the leisure the workers desired and needed. The recommendations should be sufficiently elastic to meet the requirements of special industries and to provide for unusual emergencies such as might arise due to fire, flood, etc. To illustrate this point he said:

It is true that an 8-hour day, if spread evenly over a week, makes a 48-hour week. But there is no reason why it should be spread evenly over every day in the week if industries can be better served otherwise. For instance, there is laundry work, which as I know and all of you know has its busy spell in certain days of the week, and I should provide for it accordingly. Again, there are some countries in which Saturday afternoon work is unknown. I should make a provision for that by a longer working day in the days preceding Saturday; and therefore I put the proposition to you in the form of a 48-hour week instead of an 8-hour day. I am inclined to think if that be adopted, we shall, to some extent, avoid or prevent troubles arising from overtime.

The point was also made that it would be difficult to bring countries in which industry is not highly organized to the 8-hour level.

The employers objected to an immediate vote upon this subject and later through Messrs. D. S. Marjoribanks (Great Britain) and Jules Carlier (Belgium) presented a substitute plan, the draft of which was not signed by the Dutch, Italian, and Canadian employer representatives.

While accepting the principle of the 8-hour day or 48-hour week, they would subject the rule to certain modifications, including those relating to maintenance and increase of output, existing agreements, normal distribution, and reconstruction of industry in the devastated areas, and the following specific conditions:

Special conditions have to be considered in regard to intermittent work and with regard to workers engaged either in special occupations or in work which is done after working hours.

Special consideration must be given to work executed by order of an official authority, in the interests of national defense, to maintain public service, and in connection with urgent work the execution of which is imperative either to prevent or to repair accidents which might stop work.

The limit of 48 hours per week or 8 hours per day may be exceeded and extended to a maximum of an average week of 56 hours in those industries where continuous processes are carried out by successive shifts.

Industries subject to changes of weather or which are, because of unforeseen circumstances, subject to periods of enforced idleness will have special regulations enabling them to make good for the loss of time arising from such enforced idleness. And with suitable control this will apply also in cases of idleness arising from "force majeure."

Where the character or nature of the work demands, the legislations or agreements made between employers and workpeople may extend the duration of a working day beyond 8 hours, it being understood that the authorized maximum of additional hours per year should not exceed 300.

The bureau of international labor may, in exceptional cases, and pending the restoration of normal conditions of production, call for international agreements to make further exceptions in favor of certain industries whose products are indispensable for food supply and for transport by land and water. The duration of these exceptions must be strictly limited, and in no case will they exceed five years. /

Energetic opposition to the employers' plan was voiced by the workers' delegates. Mr. Léon Jouhaux (France) insisted that the workers must have both the 8-hour day and the 48-hour week and that these should be the maximum working periods, and he introduced an amendment to Mr. Barnes' motion to that effect. Mr. Gompers (United States), on being given the privilege of the floor, pointed out that according to this plan the working week might be increased to 56 hours, and not only that, the authorized maximum of additional hours per year might reach 300 and still further exceptions be made in exceptional cases which might impose additional hours. The history of industry, he asserted, shows that "there is

more produced by the workers, everything else being equal, in an 8-hour day than in a 10 or 12 hour day."

In the lengthy general discussion of the motion which followed, the usual arguments for and against the application of the principle of the 8-hour day were made and several amendments offered. Those opposed to the application of this principle emphasized the fact that increased production is the greatest present necessity. War debts must be paid and foreign competition and immediate economic needs met. Shorter hours would mean less production, and the French employers' delegate said that the introduction of the 8-hour day in France had resulted in a 15 to 20 per cent reduction in production. If production should be cut down, the workers would be the first to suffer. It was further asserted that this limitation of working hours would not be practicable in seasonal industries such as agriculture and lumbering, in continuous industries, and others; that it would be the deathblow of small industries and would prevent starting new ones; and that in countries like Canada and the United States, where the labor question is a separate one in each Province and State, difficulties of agreement would result from the different interests of the different national political divisions.

In reply to these arguments it was maintained that the question of increase in production was not overlooked in the limitation of the length of the working time. Experience gained in the war and scientific investigation had demonstrated the fact that the longer the hours of work the less the production. As regards the application of shorter working hours in the continuous industries the difficulty of granting a weekly day of rest could be met by an increase of shifts, and these could be easily manned for the reason that in the electrical industries only a small number of workers are required for the necessary fourth shift and in the chemical and steel industries the labor required is largely unskilled labor which is readily obtained. A delegate from Czecho-Slovakia pointed out that the National Polish Assembly wished the same law applied to agriculture as governed in other industries, because the attraction of town life and shorter hours induced the laborers to leave the farms. A law of this character, he said, had been in force in Poland, a newly created State whose economic questions were hard to solve, for nearly a year and no serious objections to it had been made. The 8-hour day in some form is moreover an accomplished fact in many countries. To question its adoption, remarked the Government delegate from Netherlands, would be like trying to rediscover America. The social and ethical importance of the 8-hour day and the 48-hour week was especially emphasized. The worker must not only "be protected against

undue fatigue, but also must be insured reasonable leisure and opportunities for recreation and social life."

The motion, with all the amendments and suggested changes, was finally referred to a committee composed of 15 delegates, 5 from each section, for consideration. The final report upon the subject apart from its application in tropical countries was made by Mr. Arthur Fontaine, Director of the Labor Department of the French Ministry of Labor, in the form of a draft convention.

In general the convention provides an 8-hour day and a 48-hour week applicable in "all industrial undertakings public or private, and to all branches thereof of whatsoever kind, other than undertakings in which only members of the family are employed."

A recognition of the impossibility of a rigid application of this principle, however, resulted in the adoption of a number of important and far-reaching exceptions:

The provisions of the convention shall not apply to persons holding positions of supervision or management, or employed in a confidential capacity.

Where by law, custom, or agreement between employers' and workers' organizations (or where no such organizations exist, between the employers' and workers' representatives) the hours of work on one or more days of the week are less than eight, the limit of eight hours may be exceeded on the remaining days of the week by the sanction of the competent authority, or by agreement between such organizations or representatives: *Provided, however,* That in no case under the provisions of this paragraph shall the daily limit of eight hours be exceeded by more than one hour.

Where persons are employed in shifts it shall be permissible to employ persons in excess of 8 hours in any one day and 48 hours in any one week, if the average number of hours over a period of three weeks or less does not exceed 8 hours per day, and 48 per week.

The limit of the hours set by the convention may be exceeded "in the case of accident, actual or threatened, of urgent work to be done to machinery or plant, or of 'force majeure,' but only when necessary to avoid serious interference with the regular working of the undertaking." In continuous processes, also, where the work is done by a succession of shifts, the working hours may be extended, but not to exceed 56 in the week on the average. Limitation of hours shall not affect holidays. Agreements may be made in exceptional cases whereby the daily limit of work may be exceeded so long as the average weekly hours and the period covered by such arrangement do not exceed 48.

Commerce, agriculture, and shipping are not included in the 8-hour provision.

The rate of overtime is fixed at not less than time and a quarter. The convention is to be carried out by the posting of notices in the works or other suitable place, or "by such other method approved by

the Government," which state the conditions of employment fixed for the particular industry. It shall be an offense against the law not to observe the regulations posted. "The provisions of the convention may be suspended in any country by order of the Government, in the event of war or other emergency endangering the national safety." July 1, 1921, is the time set for carrying the terms of the convention into effect.

Mr. Crawford (workers' delegate from South Africa) made an earnest appeal for the deletion of the clause "other than undertakings in which only members of the family are employed, on the ground that such a change would tend to abolish 'sweating,'" but his motion was defeated.

The difficulties in the application of the 8-hour day and 48-hour week convention to countries in which "climatic conditions, the imperfect development of industrial organizations, or other special circumstances, make the industrial conditions substantially different," were set forth in the report of a subcommittee appointed to consider this particular phase of the subject, and headed by the Right Hon. G. N. Barnes (Great Britain).

The position of Japan presented the greatest problem. The report points out that only in the last few years has any rapid advance in the organization of industry in that country been made. Factory legislation applies only to women and children, and prescribes a working day of 13 hours as a maximum. In the case of male workers there is no regulation of hours. The restrictions of the factory act, moreover, apply only to factories employing more than 15 persons, and as much of the work is home work a large proportion of the operations are not subject to a limitation in hours. In the silk industry, for instance, which employs 900,000 workers, 53 per cent do not come under the scope of the law. Overtime to the extent of two or three hours a day is common. In the silk industry an additional hour of overtime is allowed on 120 days in the year.

In view of all these facts, the Japanese employer and Government delegates felt that Japan would be unable to adjust her industrial organization to meet the conditions of the 8-hour convention in the required time and requested modifications, at the same time signifying her intention "to accelerate the unqualified adoption of the rule in harmony with the general trend of the world."

Mr. Shichiro Muto, as substitute for the Japanese labor delegate, on the contrary urgently advised that Japan be treated precisely as the other adhering countries were treated, setting forth his views in a minority report. He protested in the name of Japanese labor and of public opinion in Japan that Japan is not a tropical country, but

climatically like the United States, Italy, and Spain; that Japanese industry has developed so wonderfully during the war that Japan is at least the industrial peer of Italy and Spain; that family industry is rapidly being transformed into the industry of modern factories. The 8-hour day, he maintained, is being adopted in an increasing number of factories, especially at Osaka, the Manchester of Japan. The opposition of Japanese employers to the introduction of the 8-hour day and the 48-hour week is due to their desire to retain their advantageous position, secured through exploitation of the workers, and the Government desires to protect the employers at the expense of the workers, who, because of limitations placed upon organizations, are unable to speak for themselves. In his opinion, the inefficiency charged against the Japanese worker is due to the prolonged hours of labor, which exhaust his energies.

The workers' delegates generally supported this position, urging that while Japan is taking her place in the world as a first-class power in every respect, she is gaining an advantage by pleading industrial inferiority, and an effort was made by Mr. Jouhaux (France) to reduce the time in which Japan might comply with the main convention to two years. Mr. Barnes maintained that if Japan were required to accept the full 8-hour convention she would be reducing her production 60 per cent; that she had not now the machinery to meet the modifications already agreed to and could not obtain it in less than three years. Mr. Jouhaux's motion was therefore defeated.

The committee recommended that Japan be given five years for applying the provisions of the main convention, and that in the meantime there be allowed certain modifications, which were enumerated in the text, and which in themselves will result in a considerable advance upon existing conditions. It suggested that coal mining be brought under the scope of the convention at once. The silk industry should have a 60-hour week, while all other industries "might be operated on a basis of a 9½-hour daily maximum, or a 57-hour week." The unit for the factory should be 10 persons instead of 15, as hitherto. The 48-hour week should also apply to minors under 15 years of age. A weekly rest period of 24 consecutive hours should be provided for, and overtime regulated in accordance with the provisions of the main convention.

As regards India the committee recommended a 60-hour week for those industries under the factory law, and urged that the Government modify its definition of a factory in such a way as to reduce the unit of 50 persons now recognized as constituting a factory. In view of the fact that China is still very largely an undeveloped country, that very little modern machinery is used, and that the

population is not industrialized, the Chinese delegate asked for an extension of time in the framing of any recommendation on the subject of Chinese industry. The committee therefore suggested that China adhere to the principle of factory legislation and submit for the consideration of the Chinese Government the possibility of adopting the 10-hour day or 60-hour week for adult workers, and an 8-hour day or 48-hour week for employed minors under 15 years of age. It also suggested that the weekly day of rest be granted, and that all factories employing more than 100 workers be included in the projected legislation.

The South African and tropical-American delegates stated that the main provisions of the convention as drafted would be applied in their countries. The only exceptions might be in the case of coal mining and sugar refining and a few other industries. Persia has no factories, and Siam little industry, so that no application of the 8-hour day need be made to them. Greece and Roumania have been so devastated by war that special consideration was necessary in their case, application of the convention being postponed to 1923 and 1924 in the case of certain Grecian industries, and to 1924 for industries in Roumania.

The draft convention on the 8-hour day was finally adopted by a substantial majority.

The following resolution on the 8-hour day passed by the International Congress of Working Women, which met in Washington just prior to the International Labor Conference, was submitted to the conference:

The first International Congress of Working Women requests the first International Congress of Labor of the League of Nations that an international convention establish:

- (1) For all workers a maximum 8-hour day and 44-hour week.
- (2) That the weekly rest period shall have an uninterrupted duration of at least one day and one-half.
- (3) That in continuous industries a minimum rest period of one half-hour shall be accorded in each 8-hour shift.

Unemployment.

The second question on the agenda of the conference, viz, that of preventing or providing against unemployment, was of such a complex nature that the committee of which Mr. Max Lazard (France) was chairman decided to divide the matters for investigation among three subcommittees. The conclusions reached by these subcommittees were finally adopted by the committee as a whole and presented to the conference in the form of: (1) A draft convention divided into three articles, dealing, respectively, with statistics, employment, and

reciprocity in the question of insurance against unemployment; (2) A draft recommendation consisting of four articles, two of which relate to the employment of workers, one to insurance against unemployment, and one to work undertaken by or on behalf of public authorities; (3) Four resolutions addressed to the governing body of the International Labor Office; (4) A draft convention on reciprocity in the treatment of foreign workers in all matters relating to the protection of labor.

The three articles of the draft convention provide, in general, that the States ratifying the convention shall communicate to the International Labor Office at intervals of not less than three months all available information and statistics regarding unemployment and the most successful measures taken to reduce unemployment. Furthermore, in States acceding to the convention, systems of free employment exchanges or agencies under a central management shall be established. Committees made up of employers and employees shall act in the capacity of advisers in carrying on the work of these exchanges, which is all to be coordinated by the International Labor Office in agreement with the States concerned.

The convention also directs that in the States ratifying it benefits from established unemployment insurance systems shall, upon terms agreed to by the States concerned, be extended to workers from other States employed in those States.

In connection with the convention it was recommended that the establishment of employment agencies charging fees be prohibited, that existing agencies of this character operate under State licenses, and that practical measures be taken to abolish them. The recommendations would also prohibit the recruiting of workers in one of the States ratifying the unemployment conventions with the view of their employment in another except as agreed upon by the countries concerned and after consultation with the employers and employees in the industries concerned. Effective systems of unemployment insurance should be established, managed either by the State or by State-aided associations, and furthermore the "International Labor Conference recommends that each State member of the permanent organization shall take measures with a view to coordinating the execution of work undertaken by or on behalf of the States and by public authorities with a view to reserving as far as practicable the work in question for periods of unemployment and for districts most affected by such unemployment."

The draft resolutions dealt with the best means of collecting and publishing information regarding unemployment, and information relative to agricultural workers, in connection with which it was

provided that the International Labor Office should arrange with the International Institute of Agriculture at Rome for the transmission of information collected by that body on the subject of agricultural employment. The question of the migration and protection of foreign workmen should be left to an international commission, which, while giving due regard to the sovereign rights of each State, should report upon measures for the protection of such workers.

A special draft convention relative to reciprocity of treatment of foreign workers provided that "the States ratifying this convention or acceding to it shall reciprocally admit to the benefit of the laws and regulations having regard to labor protection, as well as the right of lawful organization, the workers belonging to one of these States and employed in another, together with their families."

A minority report offered by Mr. Baldesi (Italy) set forth his opinion that a more equitable distribution of raw materials would be a means of preventing unemployment. He proposed that, "Considering that the question of unemployment is closely related to that of the distribution of raw materials and the means of maritime transport and freight rates, considering further that the question can only be effectively dealt with by the Council of the League of Nations, it is recommended that the Council should undertake to examine and solve the problem."

The labor delegates from France and Switzerland and the Polish Government delegate called attention to the condition of unemployment in the devastated countries now due to a dearth of raw materials and urged the adoption of Mr. Baldesi's motion. The employers' delegates generally opposed it on the ground that it was outside of the sphere of the International Labor Conference, which was trying only to regulate and improve labor conditions, to interfere with the rights of property. The question of ocean transport also entered into the discussion, and it was clear that an international control of freight rates, suggested in Mr. Baldesi's motion, would meet the disapproval of all mercantile seafaring nations. In fact, the employers' delegates from France and Switzerland, because of the complexities of the subject of unemployment and the general character of the recommendations, would have referred the committee report to the governing body, but this motion was lost, as was also Mr. Baldesi's.

The report as subsequently adopted contained two important amendments: (1) European States were limited to one-half the total membership of the international commission designed to study the regulation and protection of workers migrating from one country into another; (2) A substitute for the draft convention on the reci-

procuity of treatment of foreign workers was adopted, which, as finally drafted, reads:

The general conference recommends that each member of the international labor organization shall, on condition of reciprocity and upon terms to be agreed between the countries concerned, admit the foreign workers (together with their families) employed within its territory to the benefit of its laws and regulations for the protection of its own workers, as well as to the right of lawful organization as enjoyed by its own workers.

These amendments would give those nations to which workers would naturally migrate an equal voice on the commission, and at the same time leave to these nations the determination of the composition and of the civic rights of their population.

Employment of Women.

In reporting upon the employment of women, especially as regards night work, Miss Constance Smith (Great Britain), who made to the conference the only report presented by a woman, stated that the committee had in the main confined its work to the extension and application of the Convention of Bern, 1906, which prohibits night work for women in industry. While the principle embodied in that convention was, the chairman stated, unanimously supported by the committee, it was apparent that the great industrial changes which had developed since that time and the establishment of the League demanded a redrafting of the convention and the insertion of some new material, if it was to be an efficient international instrument.

According to the Bern Convention the limitations respecting night work apply only to undertakings employing more than 10 men or women. During the war it was necessary for several countries to suspend their factory laws and admit women to night work. This experience did not lessen the undesirability of night work for women, but rather strengthened that point of view, for the reason that while during that period it was found possible to supply certain safeguards in the large factories, in the small establishments where such safeguards are most needed they had with greatest difficulty been introduced. The proposal was made, therefore, that the limitation as to the numbers employed be removed, but that the original provision to the effect that the convention should in no case apply to "undertakings in which only the members of the family are employed" be retained.

In order to make the definition of industrial undertakings as nearly identical as possible in all the draft conventions presented to the conference, the following substitute was suggested for the original draft:

It is incumbent upon each contracting State to define the term "industrial undertaking." The definition shall in every case include—

(a) Mines and quarries and extractive industries of every kind.

(b) Industries in which articles are manufactured, altered, repaired, ornamented, finished, or adapted for sale, or broken up or demolished, or materials are transformed (including the generation, transformation, and transmission of motive power, electric, hydraulic, etc., shipbuilding, laundry work).

(c) Construction, reconstruction, repair, maintenance, alteration, or demolition of any building, railway, tramway, harbor, dock, pier, canal, inland navigation, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic, telephonic installation, electrical undertaking, gas work, waterwork, or other work or construction, and the preparation for and the laying foundation of any such work or building.

The laws of each individual country shall define the line of division which separates industry from agriculture and commerce.

The question of the adherence to the convention of certain countries hampered by climatic or backward industrial organization, of which India may serve as an example, was also one of the difficulties met by the committee. To facilitate this adherence a new article was introduced which provided that in countries covered by article 405, clause 3, of the Peace Treaty the application of the provisions of the convention might be suspended in "such industrial undertakings as may be defined in that respect by the Government of the country, provided that they should continue to be applicable to all establishments which are factories by the national law." The difference, for instance, in the definition of a factory in India and in Europe, and the divergence in the application of factory law, are such that the execution of the convention would be impossible in India unless exceptions were made.

Under the Bern Convention the prescribed rest period consists of 11 consecutive hours, including the time from 10 p. m. to 5 a. m., from which no exception is permissible. An effort was made by the Italian workers' delegate to extend the rest period to 6 a. m., making an absolute night rest of 8 hours. This proposed change injected into the discussion a consideration of the shift system, which had already been made the subject of a minority report by Mrs. Laura Casartelli Cabrini (Italy), in which she advocated an uninterrupted night rest of 8 hours' duration, thus leaving 16 hours to be divided into two 8-hour shifts.

It was contended that in industries in which the shift system is used this division of rest and working periods would be impossible, and the French employers' representative introduced a motion to the effect that the employment of women be authorized from 4 a. m. to 10 p. m. or 5 a. m. to 11 p. m., providing that the work of each shift be broken by one hour of rest. Both of these motions were defeated and the majority report adopted.

Perhaps the most advanced step taken by the conference was in the nature of the draft convention which was adopted concerning the

employment of women before and after childbirth. This convention, as finally approved, provides that (a) a woman wage earner shall not be employed during the six weeks immediately following confinement; (b) she shall have the right to leave her work six weeks before confinement, upon submitting a doctor's certificate stating that her confinement will probably take place in six weeks' time; and (c) she shall not be deprived of the benefits allowed, in case of mistake in estimating the probable time of confinement. In each case she is entitled to a maternity benefit paid either by the State or by means of a system of insurance. The amount of this benefit was left to the determination of the Government of each country, but it must be "sufficient for the full and healthy maintenance of the mother and the child." Free medical attendance is also granted. No woman may be dismissed during such absence until her absence has exceeded a "maximum period to be fixed by the competent authority in each country." Crèches are permitted. This convention, like the others, excepts undertakings in which only members of the same family are employed.

It should be noted also that it is not, like the other conventions, confined to industrial undertakings, but includes all women wage earners. As reported in by the committee it followed the form of the other conventions in this respect, but on motion of Mr. Jouhaux (France) its application was extended to commercial occupations. Mr. Jouhaux gave as his reason for this amendment the fact that about two-thirds of the women employed are in commercial undertakings. The adoption of a provision for maternity care and benefits which would affect only one-third of the women employed would, in his opinion, be "preposterous" and should not be adopted. It may be observed that while Mr. Jouhaux's statement is doubtless true, it is also probably true that there are relatively more single than married women in commercial work.

Among those who favored the majority report some apprehension was felt that the insertion of "commercial undertakings" might endanger the indorsement of the convention by the several Governments, and it was noticeable that several of the Government delegates abstained from voting on the proposition. Miss MacArthur (Great Britain) made an unsuccessful effort to abolish crèches. The Indian Government was requested to make a study of this phase of the employment of women and report to the next conference.

Employment of Children.

The report of the committee dealing with the minimum age of employment of children in industry was presented to the conference by Sir Malcolm Delevingne, chairman of the committee and Government

delegate from Great Britain, in the form of a draft convention. A unanimous decision had been reached fixing the age of admittance of children into industry at 14 years. In doing this the committee had, the chairman said, kept in view two objects: First, to obtain a real advance over existing conditions and, second, to make proposals which would be likely to meet with general acceptance. While the committee desired to fix a higher age than 14 years it had been felt that Government sanction could not be obtained, and that the age of 14 would be a real advance in many countries.

One of the difficulties met in reaching this decision was as to allowing exceptions through the transitional period in the case of countries where the age for leaving school under the educational law had not been fixed as high as 14 years. It was urged that it might be impossible for those countries to so order their educational systems as to fill in the gap between the school-leaving age and the age when the children could be given employment, but the committee decided by a majority vote that the time fixed—January, 1922—should stand.

A still greater difficulty presented itself in the matter of what modifications should be made in the case of countries with special industrial or climatic conditions. These countries, the chairman said, might be considered as constituting two groups: (1) Japan; (2) India, China, Persia, and Siam. An agreement was reached with Japan, whereby (*a*) the minimum age should be 14, but a child over 12 years of age might be permitted employment if he had finished the course in the elementary school; (*b*) the provision in the present law admitting children under 12 to certain light and easy employments should be repealed; (*c*) as regards children between 12 and 14 who have been employed the Government reserved the right to make transitional regulations.

In the case of India and other oriental countries the committee did not present a final recommendation on the ground that the questionnaire issued by the organizing committee did not reach India in time for consideration before the delegates left for America, and a proposal was made that the question of the minimum age of the employment of children as regards these countries be brought up at the International Labor Conference of 1920, when the Governments would have had opportunity to consider it.

A counter proposal was made by Miss Margaret Bondfield, speaking for the British workers' delegate, to the effect that "children under 12 should not be employed (*a*) in factories working with power, employing more than 10 persons; (*b*) in mines and quarries; (*c*) on railroads; (*d*) on docks."

In urging her amendment Miss Bondfield said that in drafting it care had been taken to select industries which were not small native

industries, but which in the main were those supervised by western people and should have western safeguards. While the educational system was doubtless insufficient at present to meet the situation, one of the best ways of securing quick governmental action in this matter was, she asserted, to prohibit child labor.

Mr. Chatterjee, Government delegate from India, opposed the amendment, insisting that time was needed to create public sentiment for such a radical departure, while Mr. Joshi, workers' delegate, earnestly supported it for the reason given by Miss Bondfield in proposing it. The report with the amendment in question was adopted.

Night work in industrial establishments was prohibited for minors under 18 years of age with the following exceptions:

ART. 3. The prohibition of night work shall not apply to young persons over the age of 16 who are employed in the following industries or work which is required by the nature of the process or to avoid the waste of fuel or material to be carried on continuously, day and night.

(a) Manufacture of iron and steel; processes in which reverberatory or regenerative furnaces are used; and galvanizing of sheet metal and wire (except the pickling process).

(b) Glassworks.

(c) Manufacture of paper.

(d) Manufacture of raw sugar.

[(e) Gold mining reduction works.]¹

ART. 4. The prohibition of night work for young persons over 16 years of age may be suspended.

(a) If [in case of serious emergency the] ¹ public interest requires it.

(b) When some emergency which the employer could not control or foresee, and which is not of a periodical character, occurs to interfere with the normal working of the undertaking.

ART. 5. The provisions of the present convention are applicable to girls of less than 18 years of age whenever these provisions involve greater restrictions on the period of employment than those provided by the Bern Convention on the Night Work of Women of the 26th day of September, 1906.

The period of night rest shall comprise 11 consecutive hours and shall include the period between 10 p. m. and 5 a. m., except in tropical countries where work is suspended in the middle of the day. Here the period of night rest may be less than 11 hours if compensatory rest is given during the day. In bakeries where night work is prohibited for all workers, the hours 9 p. m. to 4 a. m. may be substituted for the hours of rest fixed by the convention. Coal and lignite mines are also exceptions to this provision.

As in the case of hours of employment of women, the question of the shift system entered into the discussion. To meet the case of countries where the national law requires that a longer period of rest

¹ Amendment.

should be allowed during the course of the shift, the committee recommended that "in industries in which work is divided into two shifts the first shift may begin at 4 a. m. and the second may finish at 10 p. m., or the first shift may begin at 5 a. m. and the second may finish at 11 p. m." On the motion of Mr. Baldesi (Italy) this entire paragraph was deleted.

It was furthermore found necessary to modify the convention in its application to Japan and India. As to Japan, 15 years of age for the first three years after the convention becomes operative and after that time 16 years of age was substituted for 18 years as provided in the convention. As to India, the convention applies only to such persons as come under the factory act, and for boys, 14 years was substituted for 18 years. In the regions devastated by war the prohibition of night work for minors between 14 and 16 was referred to the International Labor Conference of 1921. The entire convention is to come into force not later than July 1, 1922.

The resolutions on child labor passed by the International Congress of Working Women and submitted to the conference are interesting in view of the action taken, as presenting standards toward which future international labor conferences may strive.

Employment of Children.

(a) *Minimum age.*—No child shall be employed or permitted to work in any gainful occupation unless he is 16 years of age, has completed the elementary school, and has been found by a school physician or other medical officer especially appointed for that purpose to be of normal development for a child of his age and physically fit for the work at which he is to be employed.

No young person under 18 years of age shall be employed in or about a mine or quarry.

The legal workday for young persons between 16 and 18 years of age shall be shorter than the legal workday for adults.

(b) *During the night.*—No minor shall be employed between the hours of 6 p. m. and 7 a. m.

(c) *In unhealthy processes.*—Prohibition of the employment of minors in dangerous or hazardous occupations or at any work which will retard their proper physical development.

Administration.

(1) *Work permits.*—A yearly medical inspection by medical officer appointed for that purpose by the authorities, records of which shall be kept.

(2) Lists of employed minors with their hours of work shall be posted in all workrooms in which they are employed.

(3) The number of inspectors, and especially women inspectors, employed by the factory or labor commission shall be sufficient to insure regular inspection of all establishments in which children are employed and such special inspections and investigations as are necessary to insure the protection of the children.

We further recommend compulsory continuation schools for minors until the age of 18.

Unhealthy Processes.

The report of the committee on unhealthy processes was made by Dr. Legge (Great Britain), chairman, in the form of recommendations and not as draft conventions. This was a disappointment to some of the groups who felt that the committee's suggestions on this important subject should have been presented in a more binding form.

The recommendations as to processes applied only to lead poisoning and to anthrax. In the case of lead poisoning the committee recommended that "in view of the danger involved to the function of maternity and to the physical development of children, women and young persons under the age of 18 years be excluded from employment in the following processes:

- (a) In furnace work in the reduction of zinc or lead ores.
- (b) In the manipulation, treatment, or reduction of ashes containing lead, and in the desilvering of lead.
- (c) In melting lead or old zinc on a large scale.
- (d) In the manufacture of solder or alloys containing more than 10 per cent of lead.
- (e) In the manufacture of litharge, massicot, red lead, white lead, orange lead, or sulphate, chromate or silicate (frit) of lead.
- (f) In mixing and pasting in the manufacture or repair of electric accumulators.
- (g) In the cleaning of workrooms where the above processes are carried on.

It was further recommended that the employment of women and young people in processes involving the use of lead compounds be permitted subject only to the following conditions:

- (a) Locally applied exhaust ventilation so as to remove dust and fumes at the point of origin.
- (b) Cleanliness of tools and workrooms.
- (c) Notification to Government authorities of all cases of lead poisoning, and compensation therefor.
- (d) Periodic medical examination of the persons employed in such processes.
- (e) Provision of sufficient and suitable cloakroom, washing, and messroom accommodation, and of special protective clothing.
- (f) Prohibition of bringing food or drink into workrooms.

Furthermore, in industries where soluble lead compounds can be replaced by nontoxic substances, use of soluble lead compounds should be strictly regulated.

For the purposes of this recommendation, a lead compound should be considered as soluble if it contains not more than 5 per cent of its weight (estimated as metallic lead) soluble in a quarter of 1 per cent solution of hydrochloric acid.

As regards anthrax the report recommended that "arrangements should be made for the disinfection of wool infected with anthrax

spores either in the country exporting such wool, or, if that is not practicable, at the port of entry in the country importing such wool."

Recommendation was also made for the establishment of an efficient factory inspection service in each country belonging to the international labor organization where it does not already exist, and also for the creation in each country of a Government service whose duty it shall be to safeguard the health of workers and to keep in touch with the International Labor Office.

All three of these recommendations were adopted.

White Phosphorus in Match Factories.

On a motion presented by Sir Malcolm Delevingne (Great Britain) the conference unanimously adopted a resolution recommending to "all members of the international labor organization which have not yet done so that they should adhere to the international convention adopted at Bern in 1906, on the prohibition of the use of white phosphorus in the manufacture of matches."

The Governing Body of the International Labor Office.

Steps were taken at the conference to effect a permanent organization of the International Labor Office through the creation of a governing body. This body is composed of 24 members, 12 representing the various Governments, 6 representing employers and 6 representing labor, elected by the different groups. The Government representatives will be nominated by the following countries: Belgium, France, Great Britain, Italy, Japan, Germany, Switzerland, Spain, Argentina, Canada, Poland, and, pending the appointment of the United States representative, Denmark.

The employers' representatives are: Sir Allan Smith, Great Britain; Mr. Louis Guérin, France; Mr. Pirelli, jr., Italy; Mr. Jules Carlier, Belgium; Mr. F. Hodacz, Czecho-Slovakia; and, pending the appointment of a representative of the United States employers, Mr. Schindler, of Switzerland.

The workers' representatives are: Mr. Léon Jouhaux, France; Mr. J. Oudegeest, Netherlands; Mr. Stuart-Bunning, Great Britain; Mr. H. Lindqvist, Sweden; and, pending the appointment of a representative of the United States, Mr. Draper, of Canada.

Reservation was made in each group for the United States representative and in the labor group for the German representative.

The Latin-American delegates entered a written protest against the fact that the 20 Latin-American nations had been assigned only 1 place out of a total of 24 places in the governing body. They contended that if the conference is to be an international and not a

European conference, a more equitable system of representation must be devised. In this remonstrance against what was considered an unfair discrimination against non-European nations, they were joined by the delegates from South Africa, on the part of whom Mr. Gemmill, employers' representative, introduced a resolution providing "that this conference expresses its disapproval of the composition of the governing body of the International Labor Office, inasmuch as no less than 20 of the 24 members of that body are representatives of European countries."

Mr. Fontaine (France), speaking for himself, explained that the delegates were selected in accordance with the act setting up the conference, and while the composition of the body was not perfect he called attention to two facts: (1) The governing body will sit at Geneva, and will meet every two months. It would therefore be more convenient for members from European countries to attend than those farther away. (2) Through a system of grouping, small countries having no industries might be able to decide important questions affecting countries having great industries or large mining operations. The resolution was, however, adopted by a vote of 44 to 39.

The governing body elected Mr. Albert Thomas (France) provisional director general of the International Labor Office under the League of Nations, and Mr. Arthur Fontaine (France) permanent chairman. The office will be located provisionally in London.¹ The next meeting of the governing body will be held in Paris, January 26, 1920.

Regulations, covering the composition, officers, order of procedure, etc., of the conferences, as well as the election of the members of the governing body of the International Labor Office, were adopted.

Admission of Other Countries.

The discussion of the question of the admission of other countries into membership in the International Labor Conference brought out a decided difference of opinion regarding the construction to be placed upon the article in the Peace Treaty relating to membership in the international labor organization.

A decision in the case of Luxemburg, of the Dominican Republic, and of Mexico was readily reached, for the reason that the organization is composed of Governments and that participation in the conference by the representatives of any nation must be preceded by an application for membership from the Government of the nation. There had been no official request for membership on the part of the

¹ Sunderland House, Curzon Street, W. I.

Governments of Luxemburg,¹ the Dominican Republic, and Mexico at the time of the discussion, and therefore the committee on applications reached the unanimous opinion that no recommendation could be made on an application presented by third parties.

As regards Finland the committee was unable to present a unanimous report. The majority report presented by Mr. Gino Baldesi (Italy) favored the admission of Finland. His reasons for such admission were that Germany and Austria had been admitted, and that the Supreme Council at Paris had, on October 2, received two requests for admission to the conference, one from Finland and one from Norway, neither of which Governments was at that time a member of the League of Nations. The Supreme Council decided that the question of the admission of Finland, Norway, and also the Netherlands should be left to the approaching conference at Washington. Hon. N. W. Rowell (Canada), in presenting the minority report, based his objections to the admission of Finland on the ground that the conference had no power to admit Finland to the international labor organization. The Supreme Council, he contended, had no right to interpret the treaty. Admission to the international labor organization must come through the League of Nations. He moved that for these reasons the conference recommend to the League of Nations the immediate admission of Finland, and that her delegates be welcomed to an informal participation in the conference. The admission of Germany and Austria was not a parallel case because Germany had asked before she signed the treaty that she be admitted to the League of Nations and also to the international labor organization.

Senator Halfred von Koch (Sweden) maintained that the Supreme Council had the power to interpret the treaty until the League of Nations came into existence, and urged the admission of Finland on the additional ground of her industrial organization and the assistance her former experience in such conferences would be. Delegates from both employers' and workers' organizations, he said, were in Washington ready to participate in the conference. Sir Malcolm Delevingne (Great Britain) supported Mr. Rowell's motion, while Mr. Stuart-Bunning, speaking for the British workers' delegation, defended the minority report. It may be said that the workers' representatives generally favored admitting Finland. Finally, the majority and minority agreed on the following:

The conference, without giving a ruling on the question of principle, welcomes the delegates nominated by Finland to attend the Washington meeting, and invites these delegates to take part in the conference on the same condi-

¹ Later on Luxemburg applied for admission into the conference and was admitted.

tions as obtain in the case of other countries which have not adhered to the covenant of the League of Nations.

Agenda for the Conference of 1920.

The agenda for the conference of 1920 was not determined. A large number of proposals were made in the bulletins from day to day, among which were a revision of the standing orders in regard to the composition of the governing body and the position of agricultural workers, but the conference decided to leave the final selection of subjects to the governing body, who, from the suggestions and resolutions sent in from the various sections would be in a position to know which subjects were of the greatest importance.

All questions relating to seamen were referred to the special conference on employment at sea.

Opinions Regarding the Conference.

Two very distinct attitudes toward the functions of such a conference as this prevailed. Some of the more radical members believed that it was the function of the conference to set maximum standards toward which the various States were to strive; the other group believed it advisable for the conference to set up immediately attainable maximums, to keep their feet upon the ground, as it were, within the region of practicalities.

Those who had hoped that the conference might be a more forward-looking body were disposed to be critical of the lack of action on many points. Those viewing the conference from the other angle expressed great satisfaction at what had been accomplished. It was, as one of the delegates remarked, the first time that representatives of Governments, employers, and workers had come together internationally to seek a solution of industrial problems and to recommend measures for the alleviation of working conditions. This fact in itself should establish a sound basis for further social legislation.

At first glance the changes recommended do not appear material. It is doubtless true that the action on the 8-hour day is simply a "marking of time" for many nations which were represented in the conference, and which have already adopted that or a better working schedule. It did, however, crystallize opinion upon the subject, and in the case of Japan and tropical countries the modifications agreed to, if carried out by those countries, effect an important reduction of hours. The general age of the admission of minors to industry was set at 14 years, while the limit for admission of minors into night work was advanced from 16 to 18 years. Substantial changes in this respect were recommended for Japan and India. If the convention

dealing with the employment of women, especially as regards maternity care and benefits, is indorsed by the various Governments, a marked advance over existing legislation will have been made and a very necessary protection afforded the future of the race.

Genuine regret was expressed at the absence of delegates from the United States from the conference, and the opinion voiced that their presence would undoubtedly have affected the results.

A greater unity of spirit prevailed than might have been expected from a gathering representing such conflicting interests. While the different groups naturally wished and tried to protect the interests of their own countries, and in some cases to gain advantages for them, there was a real effort, as evidenced by the concessions made in committees and in debate, to take such action as would not only secure the end for which the conference was called, but would from its practical nature commend it to the Governments to which it must be submitted for approval and indorsement.

Cost of Living in the United States—Furniture and House Furnishings.

IN connection with the cost-of-living-survey articles which have been appearing in the MONTHLY LABOR REVIEW for several months, the following table presents a summary of expenditures for furniture and house furnishings. In order to show enough cases to make the figures authoritative, data from a number of cities have been combined. The table has been divided into two sections. The following northern cities are included in the first group:

Boston, Mass.	Fall River, Mass.	Omaha, Nebr.
Bridgeport, Conn.	Fort Wayne, Ind.	Philadelphia, Pa.
Buffalo, N. Y.	Grand Rapids, Mich.	Pittsburgh, Pa.
Chicago, Ill.	Indianapolis, Ind.	Portland, Me.
Cincinnati, Ohio.	Kansas City, Kans.	Providence, R. I.
Cleveland, Ohio.	Kansas City, Mo.	St. Louis, Mo.
Columbus, Ohio.	Lawrence, Mass.	St. Paul, Minn.
Des Moines, Iowa.	Manchester, N. H.	Scranton, Pa.
Detroit, Mich.	Milwaukee, Wis.	Syracuse, N. Y.
Duluth, Minn.	Minneapolis, Minn.	Trenton, N. J.
East St. Louis, Ill.	Newark, N. J.	Wichita, Kans.
Evansville, Ind.	New York, N. Y.	Wilmington, Del.

The following southern cities are included in the second group:

Atlanta, Ga.	Houston, Tex.	Mobile, Ala.
Baltimore, Md.	Jacksonville, Fla.	New Orleans, La.
Birmingham, Ala.	Knoxville, Tenn.	Norfolk, Va.
Charleston, S. C.	Little Rock, Ark.	Oklahoma City, Okla.
Dallas, Tex.	Louisville, Ky.	Richmond, Va.
El Paso, Tex.	Memphis, Tenn.	Savannah, Ga.

Under each of these groups the data as to the average number of articles purchased per family in a year, with the average expenditure per family and per article, are shown by income groups and for all incomes. The total number of families represented in the northern group of cities is 6,180; in the southern group, 1,983.

In the case of a few items, such as "pictures, frames, and other ornaments," and "other laundry utensils," when the number of articles could not be ascertained, or if given would be meaningless, only the average cost per family has been given.

Under the several items, "expenditure" per family and per article is shown instead of "cost." This is due to the fact that a great deal of furniture is bought on installments and the payments often extend over a period of more than a year. In such cases the amount paid

during the year was reported rather than the total cost of the article. For this reason the figures in the table do not give any definite clue to the expensiveness of the articles purchased.

As the requirements of the survey limited the families scheduled to those having at least one child and having kept house in the locality a year, and as most families scheduled had been actually keeping house several years, the expenditures for furniture and house furnishings were largely devoted to upkeep. Few new outfits of furniture were reported, the articles purchased being bought to replace old ones that had outlived their usefulness, or, in some instances, to meet the requirements of a growing family or to supply the demands of a higher standard of living than the family had been accustomed to in the past.

AVERAGE EXPENDITURE PER FAMILY IN ONE YEAR FOR FURNITURE AND HOUSE FURNISHINGS, BY ITEMS OF EXPENDITURE AND INCOME GROUPS.

Northern Cities.

Item.	Average expenditure per family for items of furniture and house furnishings by families having an income of—							All incomes.
	Under \$900.	\$900 and under \$1,200.	\$1,200 and under \$1,500.	\$1,500 and under \$1,800.	\$1,800 and under \$2,100.	\$2,100 and under \$2,500.	\$2,500 and over.	
Number of families.....	163	1,322	2,155	1,329	720	316	175	6,180
Average persons per family.....	4.3	4.5	4.7	4.9	5.3	5.8	6.8	4.9
Carpets:								
Average yards per family.....	2.6	2.8	3.1	3.7	4.3	4.7	6.6	3.5
Average expenditure per family....	\$2.12	\$3.14	\$4.07	\$5.99	\$7.06	\$8.81	\$11.99	\$5.05
Average expenditure per yard.....	\$0.83	\$1.11	\$1.33	\$1.63	\$1.63	\$1.89	\$1.80	\$1.46
Matting:								
Average square yards per family....	0.1	0.3	0.2	0.2	0.2	0.3	0.5	0.2
Average expenditure per family....	\$0.05	\$0.08	\$0.12	\$0.20	\$0.15	\$0.23	\$0.09	\$0.14
Average expenditure per square yard.....	\$0.75	\$0.28	\$0.75	\$0.86	\$0.83	\$0.67	\$0.18	\$0.61
Linoleum and floor oilcloth:								
Average square yards per family....	1.3	1.5	1.7	1.9	2.2	2.8	3.4	1.8
Average expenditure per family....	\$1.05	\$1.27	\$1.60	\$1.70	\$2.03	\$2.72	\$3.41	\$1.70
Average expenditure per square yard.....	\$0.80	\$0.84	\$0.96	\$0.89	\$0.94	\$0.98	\$0.99	\$0.92
Chairs and stools:								
Average number per family.....	0.5	0.7	0.6	0.7	0.7	0.9	1.0	0.7
Average expenditure per family....	\$1.18	\$1.86	\$2.53	\$3.32	\$3.57	\$4.74	\$5.32	\$2.83
Average expenditure per article....	\$2.31	\$2.71	\$4.32	\$4.81	\$5.43	\$5.53	\$5.11	\$4.28
Tables:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1
Average expenditure per family....	\$0.42	\$1.30	\$1.70	\$1.95	\$1.77	\$2.76	\$2.46	\$1.72
Average expenditure per article....	\$5.69	\$8.80	\$11.61	\$13.03	\$13.82	\$17.82	\$13.89	\$11.88
Couches, davenport, sofas, etc.:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family....	\$0.88	\$1.50	\$1.87	\$2.28	\$2.46	\$3.16	\$4.39	\$2.06
Average expenditure per article....	\$12.99	\$18.48	\$21.85	\$26.56	\$26.08	\$33.25	\$30.74	\$23.58
Bureaus, chiffoniers, dressing tables:								
Average number per family.....	0.04	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Average expenditure per family....	\$0.51	\$1.05	\$1.03	\$1.63	\$1.70	\$1.54	\$3.70	\$1.33
Average expenditure per article....	\$11.95	\$10.46	\$13.64	\$16.77	\$18.79	\$18.71	\$20.23	\$14.80
Writing desks:								
Average number per family.....	0.01	0.01	0.02	0.02	0.01	0.02	0.02	0.01
Average expenditure per family....	\$0.06	\$0.13	\$0.19	\$0.22	\$0.28	\$0.28	\$0.20	\$0.14
Average expenditure per article....	\$5.75	\$10.10	\$12.02	\$15.85	\$12.57	\$11.67	\$10.82	\$10.82
Bookcases and magazine racks:								
Average number per family.....	0.02	0.02	0.01	0.01	0.02	0.03	0.02	0.01
Average expenditure per family....	\$0.09	\$0.01	\$0.11	\$0.14	\$0.19	\$0.44	\$0.57	\$0.13
Average expenditure per article....	\$5.00	\$7.50	\$9.97	\$13.29	\$11.20	\$15.61	\$33.00	\$12.41

AVERAGE EXPENDITURE PER FAMILY IN ONE YEAR FOR FURNITURE AND HOUSE FURNISHINGS, BY ITEMS OF EXPENDITURE AND INCOME GROUPS—Continued.

Northern Cities—Continued.

Item.	Average expenditure per family for items of furniture and house furnishings by families having an income of—							All incomes.
	Under \$900.	\$900 and under \$1,200.	\$1,200 and under \$1,500.	\$1,500 and under \$1,800.	\$1,800 and under \$2,100.	\$2,100 and under \$2,500.	\$2,500 and over.	
Clocks:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.12	\$0.19	\$0.25	\$0.36	\$0.30	\$0.60	\$0.62	\$0.29
Average expenditure per article.....	\$1.90	\$2.44	\$2.66	\$3.41	\$3.16	\$4.66	\$5.67	\$3.09
Mirrors:								
Average number per family.....		0.02	0.02	0.02	0.02	0.03	0.01	0.02
Average expenditure per family.....		\$0.05	\$0.04	\$0.05	\$0.08	\$0.15	\$0.07	\$0.06
Average expenditure per article.....		\$2.52	\$2.56	\$2.60	\$4.02	\$4.64	\$12.50	\$3.02
Pictures, frames, and other ornaments:								
Average number per family.....								
Average expenditure per family.....	\$0.09	\$0.32	\$0.38	\$0.48	\$0.62	\$1.02	\$0.82	\$0.45
Hat racks, costumes, and hall trees:								
Average number per family.....								
Average expenditure per family.....	\$0.02	\$0.01	\$0.02	\$0.04	\$0.10	\$0.08	\$0.02	\$0.03
Sideboards, buffets, china closets:								
Average number per family.....		0.03	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.71	\$0.91	\$1.16	\$1.81	\$1.74	\$3.57	\$3.24	\$1.48
Average expenditure per article.....	\$23.20	\$16.67	\$20.75	\$27.37	\$26.73	\$33.14	\$33.38	\$23.93
Bedsteads:								
Average number per family.....	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2
Average expenditure per family.....	\$1.02	\$1.74	\$1.72	\$2.64	\$2.92	\$3.52	\$4.39	\$2.21
Average expenditure per article.....	\$7.54	\$9.21	\$10.39	\$13.29	\$13.58	\$14.63	\$16.33	\$11.68
Bed springs:								
Average number per family.....	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.1
Average expenditure per family.....	\$0.50	\$0.76	\$0.78	\$1.17	\$1.38	\$1.61	\$2.10	\$1.00
Average expenditure per article.....	\$4.82	\$5.58	\$6.23	\$7.31	\$7.82	\$7.39	\$7.66	\$6.70
Mattresses:								
Average number per family.....	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.2
Average expenditure per family.....	\$0.95	\$1.38	\$1.62	\$2.17	\$2.52	\$2.57	\$4.07	\$1.89
Average expenditure per article.....	\$5.36	\$6.66	\$7.82	\$8.68	\$9.59	\$9.77	\$9.37	\$8.18
Pillows:								
Average number per family.....	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1
Average expenditure per family.....	\$0.13	\$0.16	\$0.19	\$0.21	\$0.28	\$0.28	\$0.42	\$0.21
Average expenditure per article.....	\$1.47	\$1.39	\$1.64	\$1.78	\$1.75	\$1.45	\$2.05	\$1.64
Blankets:								
Average number per family.....	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.5
Average expenditure per family.....	\$1.09	\$1.19	\$1.63	\$2.12	\$2.17	\$2.57	\$2.92	\$1.78
Average expenditure per article.....	\$2.90	\$3.00	\$3.33	\$3.54	\$3.51	\$3.78	\$3.76	\$3.39
Quilts and comforts:								
Average number per family.....	0.1	0.1	0.2	0.2	0.2	0.2	0.4	0.2
Average expenditure per family.....	\$0.52	\$0.49	\$0.66	\$0.85	\$0.90	\$0.92	\$1.56	\$0.73
Average expenditure per article.....	\$4.05	\$3.40	\$3.69	\$3.61	\$3.87	\$4.45	\$3.50	\$3.70
Sheets:								
Average number per family.....	0.4	0.9	1.1	1.5	0.2	2.1	2.5	1.3
Average expenditure per family.....	\$0.47	\$1.05	\$1.41	\$1.92	\$2.16	\$2.98	\$3.55	\$1.65
Average expenditure per article.....	\$1.25	\$1.24	\$1.28	\$1.31	\$1.36	\$1.40	\$1.45	\$1.31
Pillow cases:								
Average number per family.....	0.7	1.5	1.8	2.0	2.1	3.0	3.5	1.9
Average expenditure per family.....	\$0.25	\$0.55	\$0.70	\$0.85	\$0.90	\$1.31	\$1.48	\$0.77
Average expenditure per article.....	\$0.35	\$0.38	\$0.40	\$0.42	\$0.43	\$0.44	\$0.42	\$0.41
Spreads:								
Average number per family.....	0.05	0.1	0.1	0.2	0.2	0.2	0.3	0.1
Average expenditure per family.....	\$0.12	\$0.29	\$0.40	\$0.48	\$0.55	\$0.55	\$1.05	\$0.45
Average expenditure per article.....	\$2.37	\$2.56	\$3.02	\$3.01	\$3.31	\$3.63	\$3.35	\$3.10
Pitchers, wash bowls, etc.:								
Average number per family.....								
Average expenditure per family.....	\$0.01	\$0.03	\$0.02	\$0.02	\$0.03	\$0.04	\$0.01	\$0.02
Dishes and glassware:								
Average number per family.....								
Average expenditure per family.....	\$0.54	\$0.87	\$1.35	\$1.86	\$2.76	\$2.20	\$2.93	\$1.59
Knives, forks, spoons, etc.:								
Average number per family.....								
Average expenditure per family.....	\$0.10	\$0.21	\$0.27	\$0.38	\$0.49	\$0.72	\$1.04	\$0.35
Stoves, ranges, and heaters:								
Average number per family.....	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3
Average expenditure per family.....	\$4.80	\$3.99	\$4.81	\$5.69	\$4.99	\$7.11	\$7.96	\$5.05
Average expenditure per article.....	\$15.97	\$16.34	\$18.46	\$22.98	\$20.18	\$25.25	\$29.00	\$19.79
Kitchen cabinets:								
Average number per family.....	0.04	0.02	0.02	0.02	0.01	0.02	0.04	0.02
Average expenditure per family.....	\$0.61	\$0.33	\$0.33	\$0.43	\$0.26	\$0.19	\$0.93	\$0.36
Average expenditure per article.....	\$16.68	\$13.73	\$18.11	\$19.05	\$21.13	\$11.90	\$23.34	\$17.43
Kitchen utensils (pots, pans, etc.):								
Average number per family.....								
Average expenditure per family.....	\$0.52	\$0.71	\$0.98	\$1.15	\$1.46	\$1.76	\$1.87	\$1.07

AVERAGE EXPENDITURE PER FAMILY IN ONE YEAR FOR FURNITURE AND HOUSE FURNISHINGS, BY ITEMS OF EXPENDITURE AND INCOME GROUPS—Continued.

Northern Cities—Continued.

Item.	Average expenditure per family for items of furniture and house furnishings by families having an income of—							All incomes.
	Under \$500.	\$900 and under \$1,200.	\$1,200 and under \$1,500.	\$1,500 and under \$1,800.	\$1,800 and under \$2,100.	\$2,100 and under \$2,500.	\$2,500 and over.	
Refrigerators:								
Average number per family.....	0.1	0.05	0.05	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.66	\$0.60	\$0.71	\$0.97	\$0.91	\$1.33	\$1.17	\$0.81
Average expenditure per article.....	\$11.93	\$12.38	\$14.74	\$16.57	\$16.77	\$16.78	\$18.68	\$15.16
Brooms and brushes:								
Average expenditure per family.....	\$1.02	\$1.31	\$1.50	\$1.61	\$1.71	\$1.73	\$2.04	\$1.52
Carpet sweepers and vacuum cleaners:								
Average number per family.....	0.02	0.03	0.05	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.68	\$0.14	\$0.33	\$0.60	\$1.48	\$1.36	\$0.92	\$0.54
Average expenditure per article.....	\$4.30	\$4.56	\$7.16	\$9.73	\$14.16	\$12.65	\$13.44	\$9.73
Mops:								
Average number per family.....	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3
Average expenditure per family.....	\$0.13	\$0.11	\$0.13	\$0.16	\$0.18	\$0.22	\$0.21	\$0.14
Average expenditure per article.....	\$0.38	\$0.42	\$0.40	\$0.46	\$0.56	\$0.53	\$0.49	\$0.45
Tablecloths, cotton:								
Average number per family.....	0.1	0.2	0.2	0.4	0.4	0.5	0.6	0.3
Average expenditure per family.....	\$0.15	\$0.26	\$0.39	\$0.57	\$0.66	\$0.81	\$1.06	\$0.47
Average expenditure per article.....	\$1.21	\$1.44	\$1.57	\$1.63	\$1.63	\$1.79	\$1.81	\$1.60
Tablecloths, linen:								
Average number per family.....	0.01	0.01	0.02	0.05	0.1	0.1	0.1	0.04
Average expenditure per family.....	\$0.02	\$0.04	\$0.11	\$0.17	\$0.32	\$0.44	\$0.22	\$0.15
Average expenditure per article.....	\$3.00	\$4.04	\$4.62	\$3.68	\$4.12	\$4.43	\$3.01	\$4.08
Napkins, cotton:								
Average number per family.....		0.2	0.2	0.3	0.4	0.8	1.0	0.3
Average expenditure per family.....		\$0.03	\$0.04	\$0.06	\$0.07	\$0.15	\$0.24	\$0.06
Average expenditure per article.....		\$0.17	\$0.19	\$0.22	\$0.19	\$0.19	\$0.25	\$0.20
Napkins, linen:								
Average number per family.....		0.01	0.05	0.04	0.1	0.3	0.3	0.1
Average expenditure per family.....		\$0.01	\$0.03	\$0.02	\$0.07	\$0.11	\$0.07	\$0.03
Average expenditure per article.....		\$0.75	\$0.51	\$0.45	\$0.51	\$0.38	\$0.24	\$0.45
Towels, cotton:								
Average number per family.....	1.4	1.9	2.5	3.0	3.6	4.5	5.4	2.7
Average expenditure per family.....	\$0.33	\$0.44	\$0.65	\$0.87	\$1.00	\$1.46	\$1.55	\$0.76
Average expenditure per article.....	\$0.24	\$0.24	\$0.26	\$0.29	\$0.28	\$0.32	\$0.31	\$0.28
Towels, linen:								
Average number per family.....	0.04	0.04	0.1	0.2	0.2	0.2	0.5	0.1
Average expenditure per family.....	\$0.02	\$0.01	\$0.05	\$0.08	\$0.10	\$0.11	\$0.26	\$0.06
Average expenditure per article.....	\$0.37	\$0.39	\$0.45	\$0.51	\$0.50	\$0.54	\$0.47	\$0.48
Table oilcloth:								
Average square yards per family.....	0.5	0.9	0.9	1.0	1.0	1.2	1.4	0.9
Average expenditure per family.....	\$0.15	\$0.29	\$0.32	\$0.36	\$0.34	\$0.44	\$0.49	\$0.33
Average expenditure per square yard.....	\$0.31	\$0.34	\$0.35	\$0.36	\$0.34	\$0.38	\$0.35	\$0.35
Lamps, lamp chimneys, gas mantles, and electric bulbs:								
Average expenditure per family.....	\$0.70	\$0.99	\$1.22	\$1.39	\$1.65	\$1.86	\$2.60	\$1.32
Pianos and players:								
Average number per family.....	0.01	0.03	0.05	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.25	\$1.94	\$3.52	\$8.11	\$9.42	\$13.85	\$8.19	\$5.43
Average expenditure per article.....	\$40.00	\$64.23	\$72.29	\$96.20	\$107.60	\$101.79	\$79.61	\$87.86
Talking machines:								
Average number per family.....	0.04	0.05	0.07	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$1.23	\$1.70	\$2.92	\$4.00	\$5.91	\$5.71	\$8.61	\$3.50
Average expenditure per article.....	\$33.33	\$37.54	\$39.34	\$49.19	\$59.11	\$64.46	\$65.53	\$47.32
Other musical instruments:								
Average number per family.....		0.01	0.01	0.01	0.03	0.04	0.02	0.01
Average expenditure per family.....		\$0.17	\$0.33	\$0.20	\$0.63	\$1.13	\$0.12	\$0.33
Average expenditure per article.....		\$32.32	\$25.26	\$19.14	\$25.39	\$27.56	\$6.73	\$24.51
Records, rolls, etc.:								
Average expenditure per family.....	\$0.18	\$0.52	\$1.00	\$1.55	\$2.57	\$3.10	\$4.24	\$1.38
Window shades:								
Average number per family.....	0.4	0.8	0.6	0.9	0.8	1.3	1.0	0.8
Average expenditure per family.....	\$0.31	\$0.54	\$0.49	\$0.73	\$0.62	\$0.95	\$0.87	\$0.60
Average expenditure per article.....	\$0.74	\$0.71	\$0.80	\$0.83	\$0.78	\$0.76	\$0.88	\$0.78
Screens, window and door:								
Average number per family.....	0.3	0.4	0.6	0.7	0.7	0.8	0.9	0.6
Average expenditure per family.....	\$0.16	\$0.26	\$0.42	\$0.56	\$0.54	\$0.59	\$0.74	\$0.44
Average expenditure per article.....	\$0.61	\$0.68	\$0.74	\$0.84	\$0.79	\$0.79	\$0.79	\$0.77

AVERAGE EXPENDITURE PER FAMILY IN ONE YEAR FOR FURNITURE AND HOUSE FURNISHINGS, BY ITEMS OF EXPENDITURE AND INCOME GROUPS—Continued.

Northern Cities—Concluded.

Item.	Average expenditure per family for items of furniture and house furnishings by families having an income of—							All incomes.
	Under \$900.	\$900 and under \$1,200.	\$1,200 and under \$1,500.	\$1,500 and under \$1,800.	\$1,800 and under \$2,100.	\$2,100 and under \$2,500.	\$2,500 and over.	
Curtains, draperies, portières, sofa pillows:								
Average expenditure per family....	\$0.63	\$1.03	\$1.54	\$2.06	\$2.44	\$2.93	\$3.44	\$1.76
Tubs:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family....	\$0.10	\$0.11	\$0.14	\$0.13	\$0.13	\$0.20	\$0.17	\$0.13
Average expenditure per article....	\$1.21	\$1.24	\$1.43	\$1.50	\$1.50	\$1.47	\$1.42	\$1.43
Wash boilers:								
Average number per family.....	0.04	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Average expenditure per family....	\$0.07	\$0.25	\$0.24	\$0.30	\$0.34	\$0.37	\$0.37	\$0.27
Average expenditure per article....	\$1.79	\$2.56	\$2.44	\$2.43	\$2.70	\$2.34	\$2.98	\$2.50
Washboards:								
Average number per family.....	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2
Average expenditure per family....	\$0.11	\$0.12	\$0.14	\$0.15	\$0.15	\$0.15	\$0.19	\$0.14
Average expenditure per article....	\$0.54	\$0.56	\$0.59	\$0.60	\$0.60	\$0.64	\$0.61	\$0.59
Wringers:								
Average number per family.....	0.03	0.1	0.04	0.04	0.04	0.04	0.02	0.04
Average expenditure per family....	\$0.17	\$0.30	\$0.26	\$0.23	\$0.17	\$0.15	\$0.10	\$0.24
Average expenditure per article....	\$5.70	\$3.73	\$5.82	\$5.27	\$4.06	\$3.84	\$4.50	\$5.38
Irons:								
Average number per family.....	0.02	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Average expenditure per family....	\$0.11	\$0.14	\$0.22	\$0.32	\$0.42	\$0.37	\$0.36	\$0.25
Average expenditure per article....	\$5.83	\$2.09	\$2.57	\$2.71	\$3.17	\$3.27	\$2.08	\$2.67
Washing machines:								
Average number per family.....	0.01	0.02	0.03	0.04	0.1	0.03	0.04	0.03
Average expenditure per family....	\$0.09	\$0.28	\$0.71	\$1.45	\$2.06	\$0.96	\$1.60	\$0.96
Average expenditure per article....	\$14.50	\$12.42	\$20.98	\$35.57	\$41.12	\$30.26	\$40.04	\$27.98
Other laundry utensils:								
Average expenditure per family....	\$0.03	\$0.08	\$0.12	\$0.12	\$0.13	\$0.23	\$0.11	\$0.11
Toys, sleds, carts, etc.:								
Average expenditure per family....	\$2.20	\$2.98	\$4.28	\$5.05	\$5.55	\$5.40	\$4.56	\$4.32
Baby carriages and go-carts:								
Average number per family.....	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2
Average expenditure per family....	\$1.93	\$2.87	\$2.20	\$3.01	\$2.36	\$2.14	\$0.70	\$2.51
Average expenditure per article....	\$11.21	\$14.98	\$15.24	\$16.32	\$17.32	\$19.29	\$10.27	\$15.61
Sewing machines:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.1	0.04	0.1
Average expenditure per family....	\$0.70	\$1.65	\$1.61	\$1.77	\$2.01	\$1.88	\$1.02	\$1.67
Average expenditure per article....	\$10.36	\$19.80	\$21.12	\$25.96	\$28.40	\$23.76	\$25.57	\$22.51
Other furniture and furnishings:								
Average expenditure per family....	\$0.27	\$0.82	\$1.08	\$1.45	\$1.86	\$2.46	\$2.28	\$1.28
Total average expenditure per family.....	\$30.66	\$45.60	\$58.70	\$80.26	\$91.65	\$111.37	\$121.78	\$68.12

Southern Cities.

Number of families.....	63	106	562	456	302	136	58	1,983
Average persons per family.....	4.5	4.7	4.8	5.1	5.3	5.7	6.3	5.0
Carpets:								
Average yards per family.....	1.3	2.3	3.4	4.9	4.5	4.6	6.7	3.8
Average expenditure per family....	\$1.18	\$2.42	\$4.17	\$6.28	\$7.51	\$8.76	\$9.38	\$5.19
Average expenditure per yard.....	\$1.17	\$1.05	\$1.24	\$1.28	\$1.68	\$1.91	\$1.40	\$1.37
Matting:								
Average square yard per family....	0.8	1.3	1.3	0.8	1.2	1.0	2.1	1.2
Average expenditure per family....	\$0.48	\$0.73	\$0.71	\$0.56	\$1.20	\$0.86	\$1.76	\$0.79
Average expenditure per square yard.....	\$0.61	\$0.55	\$0.55	\$0.68	\$0.96	\$0.87	\$0.85	\$0.67
Linoleum and floor oil cloth:								
Average square yard per family....	1.4	1.1	1.3	1.2	1.4	2.0	0.6	1.3
Average expenditure per family....	\$0.86	\$0.79	\$1.18	\$1.23	\$1.47	\$2.03	\$0.67	\$1.19
Average expenditure per square yard.....	\$0.62	\$0.73	\$0.93	\$1.03	\$1.02	\$1.02	\$1.14	\$0.94

AVERAGE EXPENDITURE PER FAMILY IN ONE YEAR FOR FURNITURE AND HOUSE FURNISHINGS, BY ITEMS OF EXPENDITURE AND INCOME GROUPS—Continued.

Southern Cities—Continued.

Item.	Average expenditure per family for items of furniture and house furnishings by families having an income of—							All incomes.
	Under \$900.	\$900 and under \$1,200.	\$1,200 and under \$1,500.	\$1,500 and under \$1,800.	\$1,800 and under \$2,100.	\$2,100 and under \$2,500.	\$2,500 and over.	
Chairs and stools:								
Average number per family.....	1.0	0.8	1.0	1.0	0.9	1.1	0.9	1.0
Average expenditure per family.....	\$1.54	\$2.26	\$3.24	\$3.68	\$3.90	\$5.13	\$4.78	\$4.35
Average expenditure per article.....	\$1.02	\$2.76	\$3.27	\$3.55	\$4.41	\$4.72	\$4.88	\$4.52
Tables:								
Average number per family.....	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Average expenditure per family.....	\$1.35	\$1.41	\$2.30	\$3.22	\$2.40	\$3.17	\$5.25	\$2.16
Average expenditure per article.....	\$7.08	\$9.69	\$11.16	\$14.52	\$14.24	\$16.57	\$21.75	\$12.88
Couches, davenport, sofas, etc.:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.94	\$1.42	\$1.84	\$1.89	\$3.66	\$2.27	\$3.02	\$2.08
Average expenditure per article.....	\$14.81	\$21.31	\$20.70	\$21.55	\$28.35	\$30.93	\$35.00	\$23.55
Bureaus, chiffoniers, dressing tables:								
Average number per family.....	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1
Average expenditure per family.....	\$1.17	\$1.17	\$1.90	\$2.88	\$2.84	\$3.99	\$3.14	\$2.28
Average expenditure per article.....	\$8.22	\$11.32	\$14.25	\$17.98	\$24.51	\$24.06	\$18.20	\$16.97
Writing desks:								
Average number per family.....	.....	0.01	0.02	0.02	0.01	0.04	0.1	0.02
Average expenditure per family.....	.....	\$0.07	\$0.12	\$0.19	\$0.13	\$0.77	\$0.51	\$0.18
Average expenditure per article.....	.....	\$9.17	\$7.61	\$11.03	\$12.58	\$17.42	\$10.50	\$11.19
Bookcases and magazine racks:								
Average number per family.....	.....	0.01	0.01	0.01	0.01	.....	0.03	0.01
Average expenditure per family.....	.....	\$0.09	\$0.13	\$0.04	\$0.11	.....	\$0.52	\$0.10
Average expenditure per article.....	.....	\$18.50	\$9.13	\$5.13	\$8.38	.....	\$15.00	\$9.70
Clocks:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.15	\$0.16	\$0.27	\$0.19	\$0.24	\$0.29	\$0.17	\$0.22
Average expenditure per article.....	\$1.85	\$1.91	\$2.79	\$2.85	\$2.58	\$1.01	\$2.53	\$2.63
Mirrors:								
Average number per family.....	0.02	0.01	0.02	.....	0.01	0.01	0.02	0.01
Average expenditure per family.....	\$0.002	\$0.01	\$0.06	.....	\$0.02	\$0.03	\$0.03	\$0.03
Average expenditure per article.....	\$0.10	\$3.03	\$3.31	.....	\$3.00	\$1.00	\$1.50	\$2.99
Pictures, frames, and other ornaments:								
Average expenditure per family.....	\$0.40	\$0.23	\$0.35	\$0.26	\$0.31	\$0.30	\$0.82	\$0.31
Rat racks, costumes, and hall trees:								
Average expenditure per family.....	.....	\$0.02	\$0.11	\$0.08	\$0.14	\$0.06	.....	\$0.03
Side boards, buffets, china closets:								
Average number per family.....	0.1	0.04	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.97	\$0.83	\$1.86	\$1.91	\$1.93	\$3.77	\$1.21	\$1.81
Average expenditure per article.....	\$12.20	\$21.03	\$22.76	\$23.59	\$26.43	\$36.64	\$35.14	\$24.88
Bedsteads:								
Average number per family.....	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Average expenditure per family.....	\$1.22	\$2.05	\$2.99	\$3.02	\$2.32	\$3.43	\$2.34	\$2.66
Average expenditure per article.....	\$7.00	\$10.02	\$11.05	\$12.17	\$12.28	\$15.05	\$12.32	\$11.50
Bed springs:								
Average number per family.....	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Average expenditure per family.....	\$0.40	\$0.88	\$1.06	\$1.11	\$1.19	\$1.57	\$1.09	\$1.67
Average expenditure per article.....	\$4.17	\$4.84	\$5.42	\$5.62	\$7.35	\$9.73	\$5.29	\$5.85
Mattresses:								
Average number per family.....	0.2	0.2	0.3	0.2	0.3	0.2	0.3	0.2
Average expenditure per family.....	\$1.45	\$1.82	\$2.14	\$1.67	\$2.71	\$2.89	\$3.30	\$2.11
Average expenditure per article.....	\$6.54	\$7.44	\$8.01	\$7.85	\$9.86	\$12.06	\$10.63	\$8.52
Pillows:								
Average number per family.....	0.03	0.1	0.1	0.1	0.1	0.1	.....	0.1
Average expenditure per family.....	\$0.03	\$0.16	\$0.20	\$0.18	\$0.17	\$0.15	.....	\$0.17
Average expenditure per article.....	\$1.00	\$1.35	\$1.59	\$1.82	\$1.54	\$1.86	.....	\$1.59
Blankets:								
Average number per family.....	0.2	0.4	0.4	0.5	0.6	0.6	0.5	0.5
Average expenditure per family.....	\$0.60	\$1.18	\$1.73	\$2.01	\$2.40	\$3.03	\$3.08	\$1.88
Average expenditure per article.....	\$2.52	\$3.36	\$4.02	\$4.38	\$4.31	\$4.74	\$5.77	\$4.16
Quilts and comforts:								
Average number per family.....	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2
Average expenditure per family.....	\$0.37	\$0.43	\$0.60	\$0.66	\$0.92	\$0.91	\$1.09	\$0.65
Average expenditure per article.....	\$2.91	\$3.48	\$3.81	\$3.57	\$3.53	\$4.41	\$5.29	\$3.72
Sheets:								
Average number per family.....	0.7	1.1	1.3	1.6	2.0	2.4	2.6	1.5
Average expenditure per family.....	\$0.97	\$1.48	\$1.80	\$2.47	\$3.06	\$3.75	\$3.62	\$2.21
Average expenditure per article.....	\$1.29	\$1.33	\$1.39	\$1.51	\$1.55	\$1.55	\$1.41	\$1.46

AVERAGE EXPENDITURE PER FAMILY IN ONE YEAR FOR FURNITURE AND HOUSE FURNISHINGS, BY ITEMS OF EXPENDITURE AND INCOME GROUPS—Continued.

Southern Cities—Continued.

Item.	Average expenditure per family for items of furniture and house furnishings by families having an income of—							All incomes.
	Under \$900.	\$900 and under \$1,200.	\$1,200 and under \$1,500.	\$1,500 and under \$1,800.	\$1,800 and under \$2,100.	\$2,100 and under \$2,500.	\$2,500 and over.	
Pillow cases:								
Average number per family	1.4	1.4	1.8	2.0	2.4	2.7	3.1	1.9
Average expenditure per family	\$0.53	\$0.55	\$0.75	\$0.84	\$1.01	\$1.30	\$1.29	\$0.82
Average expenditure per article	\$0.38	\$0.40	\$0.43	\$0.41	\$0.42	\$0.48	\$0.42	\$0.42
Spreads:								
Average number per family	0.1	0.1	0.1	0.2	0.2	0.4	0.2	0.2
Average expenditure per family	\$0.34	\$0.34	\$0.42	\$0.51	\$0.69	\$1.21	\$0.60	\$0.52
Average expenditure per article	\$5.38	\$3.30	\$3.42	\$3.08	\$3.87	\$3.35	\$2.92	\$3.39
Pitchers, washbowls, etc.:								
Average expenditure per family		\$0.03	\$0.07	\$0.06	\$0.06	\$0.07	\$0.02	\$0.06
Dishes and glassware:								
Average expenditure per family	\$1.26	\$0.78	\$1.22	\$1.44	\$2.46	\$2.68	\$2.06	\$1.49
Knives, forks, spoons, etc.:								
Average expenditure per family	\$0.14	\$0.15	\$0.54	\$0.21	\$0.54	\$1.24	\$0.19	\$0.41
Stoves, ranges, and heaters:								
Average number per family	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.3
Average expenditure per family	\$1.87	\$4.86	\$4.17	\$6.16	\$7.09	\$8.63	\$10.70	\$5.64
Average expenditure per article	\$9.83	\$16.72	\$14.55	\$19.10	\$19.12	\$23.01	\$22.99	\$17.80
Kitchen cabinets:								
Average number per family	0.1	0.1	0.1	0.05	0.1	0.1	0.03	0.1
Average expenditure per family	\$1.48	\$0.89	\$1.40	\$1.14	\$1.42	\$2.11	\$1.50	\$1.30
Average expenditure per article	\$13.36	\$14.53	\$21.30	\$24.86	\$22.61	\$28.70	\$43.50	\$21.24
Kitchen utensils (pots, pans, etc.):								
Average expenditure per family	\$0.61	\$0.69	\$0.94	\$1.42	\$1.50	\$1.53	\$1.67	\$1.14
Refrigerators:								
Average number per family	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Average expenditure per family	\$0.57	\$1.29	\$1.61	\$1.94	\$1.95	\$2.86	\$3.28	\$1.78
Average expenditure per article	\$7.20	\$14.99	\$15.92	\$17.66	\$19.05	\$22.87	\$21.17	\$17.26
Brooms and brushes:								
Average expenditure per family	\$1.63	\$1.84	\$2.00	\$2.30	\$2.33	\$2.51	\$2.04	\$2.13
Carpet sweepers and vacuum cleaners:								
Average number per family	0.02	0.01	0.02	0.02	0.05	0.01	0.03	0.02
Average expenditure per family	\$0.06	\$0.01	\$0.07	\$0.30	\$0.77	\$0.04	\$0.10	\$0.2
Average expenditure per article	\$3.50	\$1.91	\$3.92	\$17.24	\$16.06	\$2.75	\$2.88	\$10.77
Mops:								
Average number per family	0.2	0.3	0.5	0.5	0.5	0.5	0.5	0.4
Average expenditure per family	\$0.10	\$0.14	\$0.25	\$0.23	\$0.28	\$0.28	\$0.26	\$0.23
Average expenditure per article	\$0.43	\$0.48	\$0.52	\$0.50	\$0.60	\$0.55	\$0.49	\$0.52
Tablecloths, cotton:								
Average number per family	0.03	0.1	0.3	0.4	0.4	0.4	0.7	0.3
Average expenditure per family	\$0.05	\$0.19	\$0.43	\$0.71	\$0.76	\$0.79	\$1.65	\$0.54
Average expenditure per article	\$1.50	\$1.49	\$1.59	\$1.87	\$1.88	\$2.16	\$2.23	\$1.82
Tablecloths, linen:								
Average number per family		0.01	0.02	0.02	0.03	0.1	0.1	0.03
Average expenditure per family		\$0.02	\$0.08	\$0.08	\$0.16	\$0.43	\$0.35	\$0.11
Average expenditure per article		\$2.50	\$3.62	\$4.38	\$4.78	\$5.35	\$2.86	\$4.16
Napkins, cotton:								
Average number per family		0.1	0.2	0.4	0.6	0.7	1.0	0.3
Average expenditure per family		\$0.01	\$0.04	\$0.08	\$0.12	\$0.14	\$0.24	\$0.07
Napkins, linen:								
Average number per family			0.01	0.04	0.1	0.3		0.04
Average expenditure per family			\$0.01	\$0.02	\$0.05	\$0.12		\$0.02
Average expenditure per article			\$0.67	\$0.39	\$0.58	\$0.42		\$0.48
Towels, cotton:								
Average number per family	1.0	2.1	2.5	3.2	3.7	4.3	5.0	2.9
Average expenditure per family	\$0.26	\$0.47	\$0.67	\$0.86	\$1.03	\$1.23	\$1.56	\$0.78
Average expenditure per article	\$0.28	\$0.23	\$0.27	\$0.27	\$0.28	\$0.28	\$0.31	\$0.27
Towels, linen:								
Average number per family		0.03	0.01	0.03	0.05	0.1	0.1	0.03
Average expenditure per family		\$0.01	\$0.02	\$0.02	\$0.04	\$0.03	\$0.04	\$0.02
Average expenditure per article		\$0.39	\$1.27	\$0.67	\$0.79	\$0.50	\$0.42	\$0.66
Table oilcloth:								
Average square yards per family	0.8	0.8	0.9	0.8	0.8	0.7	0.8	0.3
Average expenditure per family	\$0.25	\$0.30	\$0.33	\$0.29	\$0.34	\$0.29	\$0.29	\$0.18
Average expenditure per square yard	\$0.32	\$0.36	\$0.38	\$0.37	\$0.40	\$0.39	\$0.37	\$0.37
Lamps, lamp chimneys, gas mantles, and electric bulbs:								
Average expenditure per family	\$0.53	\$0.65	\$1.02	\$1.08	\$1.41	\$1.78	\$1.47	\$1.07

AVERAGE EXPENDITURE PER FAMILY IN ONE YEAR FOR FURNITURE AND HOUSE FURNISHINGS, BY ITEMS OF EXPENDITURE AND INCOME GROUPS—Concluded.

Southern Cities—Concluded.

Item.	Average expenditure per family for items of furniture and house furnishings by families having an income of—							All incomes.
	Under \$300.	\$300 and under \$1,200.	\$1,200 and under \$1,500.	\$1,500 and under \$1,800.	\$1,800 and under \$2,100.	\$2,100 and under \$2,500.	\$2,500 and over.	
Pianos and players:								
Average number per family.....	0.02	0.03	0.04	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.04	\$2.05	\$2.44	\$0.31	\$8.40	\$10.08	\$22.31	\$5.36
Average expenditure per article.....	\$2.50	\$64.00	\$59.72	\$108.71	\$96.21	\$97.91	\$161.72	\$92.37
Talking machines:								
Average number per family.....	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.48	\$1.51	\$2.52	\$3.29	\$5.81	\$8.63	\$3.02	\$3.36
Average expenditure per article.....	\$30.00	\$27.50	\$33.78	\$49.95	\$53.21	\$61.74	\$43.75	\$44.12
Other musical instruments:								
Average number per family.....	.....	0.01	0.01	0.01	0.01	0.01	0.03	0.01
Average expenditure per family.....	.....	\$0.11	\$0.12	\$0.22	\$0.08	\$0.04	\$0.41	\$0.14
Average expenditure per article.....	.....	\$22.50	\$21.50	\$25.38	\$12.00	\$5.00	\$12.00	\$19.03
Records, rolls, etc.:								
Average expenditure per family.....	\$0.28	\$0.70	\$0.96	\$1.05	\$2.40	\$2.55	\$2.32	\$1.33
Window shades:								
Average number per family.....	0.6	0.8	0.9	1.0	0.9	1.2	0.9	0.9
Average expenditure per family.....	\$0.45	\$0.59	\$0.77	\$0.94	\$1.16	\$1.18	\$0.98	\$0.86
Average expenditure per article.....	\$0.81	\$0.77	\$0.80	\$0.93	\$1.33	\$1.02	\$1.11	\$0.96
Screens, window and door:								
Average number per family.....	0.2	0.3	0.3	0.5	0.4	0.9	1.1	0.4
Average expenditure per family.....	\$0.13	\$0.26	\$0.28	\$0.45	\$0.44	\$1.05	\$1.03	\$0.41
Average expenditure per article.....	\$1.02	\$0.79	\$0.83	\$0.96	\$0.98	\$1.17	\$0.98	\$0.94
Curtains, draperies, portières, sofa pillows:								
Average expenditure per family.....	\$0.55	\$0.78	\$0.86	\$1.39	\$1.90	\$1.40	\$1.93	\$1.18
Tubs:								
Average number per family.....	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.2
Average expenditure per family.....	\$0.17	\$0.27	\$0.38	\$0.35	\$0.32	\$0.37	\$0.30	\$0.33
Average expenditure per article.....	\$1.38	\$1.32	\$1.33	\$1.36	\$1.35	\$1.43	\$1.25	\$1.35
Wash boilers:								
Average number per family.....	0.02	0.1	0.1	0.1	0.05	0.1	0.1	0.1
Average expenditure per family.....	\$0.01	\$0.08	\$0.10	\$0.09	\$0.09	\$0.10	\$0.10	\$0.09
Average expenditure per article.....	\$0.50	\$1.23	\$1.39	\$1.45	\$1.72	\$1.65	\$1.96	\$1.44
Wash boards:								
Average number per family.....	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2
Average expenditure per family.....	\$0.10	\$0.13	\$0.12	\$0.15	\$0.13	\$0.12	\$0.15	\$0.13
Average expenditure per article.....	\$0.54	\$0.54	\$0.53	\$0.56	\$0.57	\$0.59	\$0.54	\$0.55
Wringers:								
Average number per family.....	0.02	0.01	0.02	0.01	0.01	0.03	.....	0.01
Average expenditure per family.....	\$0.02	\$0.03	\$0.10	\$0.03	\$0.06	\$0.13	.....	\$0.03
Average expenditure per article.....	\$1.50	\$4.67	\$5.08	\$7.75	\$5.78	\$4.50	.....	\$5.09
Irons:								
Average number per family.....	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1
Average expenditure per family.....	\$0.04	\$0.14	\$0.35	\$0.26	\$0.47	\$0.25	\$0.54	\$0.29
Average expenditure per article.....	\$0.48	\$2.14	\$2.61	\$3.97	\$2.89	\$1.95	\$3.95	\$2.90
Washing machines:								
Average number per family.....	.....	0.01	.....	0.01	0.01	0.03	.....	0.01
Average expenditure per family.....	.....	\$0.09	.....	\$0.12	\$0.14	\$0.65	.....	\$0.11
Average expenditure per article.....	.....	\$11.67	.....	\$17.60	\$14.00	\$22.19	.....	\$16.81
Other laundry utensils:								
Average expenditure per family.....	\$0.06	\$0.05	\$0.07	\$0.07	\$0.10	\$0.06	\$0.06	\$0.07
Toys, sleds, carts, etc.:								
Average expenditure per family.....	\$2.20	\$4.15	\$5.13	\$6.59	\$7.87	\$8.24	\$9.36	\$5.93
Baby carriages and go-carts:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.1	0.02	0.1
Average expenditure per family.....	\$1.77	\$1.38	\$1.87	\$1.68	\$1.46	\$1.99	\$0.76	\$1.61
Average expenditure per article.....	\$12.38	\$11.01	\$12.67	\$12.15	\$12.24	\$16.89	\$44.00	\$12.53
Sewing machines:								
Average number per family.....	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Average expenditure per family.....	\$0.84	\$1.54	\$3.00	\$2.24	\$2.31	\$2.77	\$2.38	\$2.32
Average expenditure per article.....	\$8.83	\$15.59	\$29.11	\$31.91	\$34.90	\$31.42	\$34.50	\$26.74
Other furniture and furnishings:								
Average expenditure per family.....	\$0.55	\$0.73	\$1.36	\$1.48	\$2.02	\$2.47	\$1.64	\$1.42
Total average expenditure per family.....	\$31.82	\$47.45	\$65.34	\$80.68	\$97.83	\$119.83	\$125.91	\$74.59

Quantity-Cost Budget Necessary to Maintain Single Man or Woman in Washington, D. C.¹

THESE are presented here tentative quantity and cost budgets necessary for the maintenance of a single man and a single woman in the clerical service of the Government in Washington, D. C., at a level of health and decency, the cost of the items included being based on prices prevailing in the National Capital in August and September, 1919.

It should be stated that on November 1 car fares were advanced to 6½ cents, thus increasing the expense for this item to \$46.50, and bringing the total budget, including savings, to \$1,067.78 in the case of a single man and to \$1,151.15 in the case of a single woman. The other items in the budget have changed but little, if at all.

Summary of Annual Budget.

	Single man.	Single woman.
1. Room (2 in a room) \$15 per month per person.....	\$180. 00	\$180. 00
2. Board:		
Regular table board, two meals on week days, three on Sunday, \$6 per week.....	312. 00	312. 00
Lunch, 25 cents per day, 313 days.....	78. 25	78. 25
Other food, fruit, confectionery, etc., 25 cents per week.....	13. 00	13. 00
3. Clothing.....	158. 36	240. 15
4. Laundry.....	52. 00	65. 00
5. Toilet supplies, etc.....	15. 00	10. 00
6. Health—medical charges, dentist, oculist.....	32. 00	43. 00
7. Religious organizations—10 cents per week.....	5. 20	5. 20
8. Labor organizations.....	5. 00	5. 00
9. Newspapers.....	8. 40	8. 40
10. Books and magazines (no special allowance—see text).....		
11. Car fare.....	37. 20	37. 20
12. Amusements, recreation, etc.....	39. 00	20. 00
13. Vacation (no special allowance—see text).....		
14. Educational purposes (no special allowance—see text).....		
15. Other incidentals.....	26. 00	20. 00
Total (not including savings).....	961. 41	1, 037. 20
16. Savings—10 per cent of total expenses.....	96. 14	103. 72
Total (including savings).....	1, 057. 55	1, 140. 92

¹ For summary report of this Bureau's study to determine the cost of maintaining the family of a Government employee in Washington at a level of health and decency and the cost involved in reaching such determination, see MONTHLY LABOR REVIEW for December, 1919, pp. 22 to 29.

Itemized Details of Budget—Rent.

Room, \$15 per month..... \$180.00 per year.

An investigation covering 50 houses in different sections of the city, including commercial boarding houses and private houses, developed that the approximate minimum cost of a clean and fairly comfortable room in a house with bath facilities was \$15 per month per person for two in a room.

A very few rooms sufficiently good to be livable were found at a slightly lower monthly rental, but these were very few in number and usually in private families where spare rooms were rented without much regard to or understanding of prevailing rates. At present, the prevailing rate seems to be \$17.50 per month for two in a room, but a sufficient number were found at \$15 per person to suggest that this sum may be taken as a minimum. This is the prevailing price per person at the Y. M. C. A. for two in a room.

The investigation covered all sections of the city. In general, very slight variations in price were found between sections for similar accommodations.

The allowance of \$15 a month is considerably lower than the rate for rooms at the Government dormitories for women, where \$20 per month per person is charged. Single rooms are rented for \$20 or double rooms for \$40.

Food.

Table board (2 meals on week days and 3 on Sundays), \$6 per week	\$312.00 per year.
Lunches (313 days at 25 cents per day)	78.25 per year.
Other food, fruit, confectionery, sodas, etc., 25 cents per week	13.00 per year.
Total.....	403.25 per year.

The prevailing rate for table board—2 meals on week days and 3 meals on Sundays—is \$6 per week, in good, and moderately good places. The lowest seems to be \$22 per month, and the places found at this rate were unprepossessing. On the other hand, \$30 per month is now quite frequent for board at regular boarding houses.

Board at the prices just cited includes, almost invariably, only two meals on week days, leaving the midday lunch as an extra expense. Probably the lowest priced lunch available is that known as the "box lunch" served from wagons in the streets and costing 20 cents. The box lunch usually consists of two sandwiches, a piece of pastry and a piece of fruit. It is possibly sufficiently nutritious for the midday lunch of an office worker but in very many cases will be

supplemented by such items as coffee, milk, a banana, an apple, at an additional expense of 5 or 10 cents.

An additional allowance of 25 cents per week is made in this budget for fruit, sweets, and other minor food items. These are not absolutely necessary, but most persons living in boarding houses find some supplementary expenditure, especially for fruit, highly desirable.

The rate for board at the Government dormitories for women is \$25 a month for two meals a day—but board in the dormitories is available only to women who occupy dormitory rooms. Thus the total cost for board, 2 meals a day, and lodging at the Government dormitories is \$45 per month—somewhat higher than the minimum allowance in this budget.

Clothing.

Clothing, man (including repairing and cleaning)-----	\$158.36 per year.
Clothing, woman-----	240.15 per year.

The clothing articles, listed below, as the minimum necessary for a single man are, with two exceptions, identical with that worked out for the husband in the family budget recently prepared. As in both cases the man is presumed to be a Government employee, it would seem that the minimum clothing requirements should be about the same. The two exceptions are cleaning and pressing and miscellaneous, both of which are considerably increased for the single man's budget, for the reason that the man living alone is usually unable to do the mending and repair work which a wife usually does, and thus the life of many garments is considerably shortened. Rather than attempt, however, to increase the number of garments on this account (for which no good information exists) it has seemed better to allow a more liberal sum for miscellaneous and for cleaning, pressing, and repairing. Therefore, the miscellaneous item is increased from \$3 to \$15 per year, which allows an additional \$1 per month for replacement, etc., and the item for cleaning, pressing, and repairing is increased from \$6 to \$31.20 per year. Information on this latter point was derived from inquiries made at the local Y. M. C. A., which indicates that the average sum spent by low-salaried residents at that place was: For pressing, 1 suit 4 times a month at 40 cents each; cleaning and pressing 4 times a year, at \$1.50 each time; and about 50 cents per month for repairs. These items would total \$31.20 per year.

On account of the difference in occupation, the clothing of the single woman will vary considerably from that of the Government worker's wife. While the housewife will wear her "better" clothing

two or three times a week, and usually only when the weather is favorable, the working woman must appear every day in the week, in all varieties of weather, dressed in clothes of good quality kept neat and clean. In order to withstand this more strenuous wear, a greater quantity and perhaps a better quality of clothing must be provided for the Government worker than for the housewife.

In preparing the clothing budget for the single woman, the quantities allowed in the study of wage-earning women made by the Bureau of Labor Statistics for the calendar year 1916 have been followed rather than the quantity budget recently prepared for the Government worker's wife. In a few instances even the quantities approved in the wage-earning women study have been decreased in order to bring this budget to a bare minimum.

The cost of the wage earners' budget in the 1916 study was approximately \$125. Since that time clothing prices in Washington have undoubtedly increased not less than 100 per cent. In the light of such an increase, the total of the following budget, \$240.15, appears sufficiently niggardly.

The following are the clothing budgets for a single man and a single woman in the Government service:

UNIT PRICE, REPLACEMENT PER YEAR, AND ANNUAL COST OF CLOTHING FOR SINGLE MAN AND SINGLE WOMAN IN GOVERNMENT SERVICE IN WASHINGTON, D. C.

Article.	Unit price.	Annual replacement.	Yearly cost.
<i>Single man.</i>			
Hats, felt.....	\$4.00	1	\$2.00
Hats, straw.....	2.00	1	2.00
Suits, winter (wool).....	40.00	1	20.00
Suits, summer (wool).....	40.00	1	20.00
Overcoat.....	40.00	1	10.00
Raincoat.....	15.00	1	2.50
Shirts, cotton.....	2.00	5	10.00
Union suits, summer.....	1.50	3	4.50
Union suits, winter (part wool).....	3.50	1	3.50
Pajamas.....	2.50	1	2.50
Socks, cotton.....	.50	12	6.00
Shoes, high.....	7.50	1	7.50
Shoes, low.....	7.50	1	3.75
Repairing, whole soles.....	3.50	1	3.50
Repairing, half soles, including heel.....	2.50	1	2.50
Rubbers.....	1.25	1	.63
Gloves, kid.....	3.00	1	1.50
Collars.....	.25	12	3.00
Ties.....	.50	3	1.50
Handkerchiefs.....	.25	8	2.00
Garters.....	.35	2	.70
Belts.....	1.50	1	.50
Suspenders.....	.75	1	.75
Umbrella.....	4.00	1	1.33
Cleaning, pressing, and repairing.....			31.20
Miscellaneous.....			15.00
Total.....			158.36
<i>Single woman.</i>			
Suit.....	75.00	1	37.50
Coat.....	75.00	1	25.00
Shirt waists, white.....	2.50	5	12.50
Waist, dress.....	10.00	1	10.00

UNIT PRICE, REPLACEMENT PER YEAR, AND ANNUAL COST OF CLOTHING FOR SINGLE MAN AND SINGLE WOMAN IN GOVERNMENT SERVICE IN WASHINGTON, D. C.—Concluded.

Article.	Unit price.	Annual replacement.	Yearly cost.
<i>Single woman—Concluded.</i>			
Dress, one-piece, wool serge.....	\$25.00	$\frac{1}{2}$	\$12.50
Skirts, white, wash.....	5.00	2	10.00
Dress, afternoon or party.....	20.00	$\frac{1}{2}$	20.00
Hats.....	10.00	2	20.00
Shoes:			
Low.....	9.50	1	9.50
High.....	12.00	1	12.00
Repairs.....	3.00	1	3.00
Heels.....	.40	4	1.60
Gloves.....	2.50	1	2.50
Stockings (cotton).....	.45	8	6.80
Stockings (silk).....	2.25	1	2.25
Corset.....	6.00	1	6.00
Nightgowns.....	1.50	2	3.00
Petticoats, white muslin.....	2.00	1	2.00
Corset covers.....	1.00	4	4.00
Union suits, year-round wear.....	1.00	5	5.00
Silk petticoat.....	7.00	1	7.00
Handkerchiefs.....	.25	10	2.50
Kimono.....	6.00	$\frac{1}{2}$	1.50
Umbrella.....	3.00	$\frac{1}{2}$	1.50
Rubbers.....	1.50	1	1.50
Cleaning and pressing.....	3.00	2	6.00
Miscellaneous expenses, to include hairpins, hair nets, combs, collars and cuffs, purse, veils, dress shields, sanitary supplies, watch repairs, etc.....			15.00
Total.....			240.15

Laundry.

Laundry, man, \$1 per week..... \$52 per year.
 Laundry, woman, \$1.25 per week..... 65 per year.

Assuming only sufficient changing of clothing to insure ordinary cleanliness, a man's laundry, done at a steam laundry, costs at prevailing prices approximately \$1.67 per week.

Inquiries made at a large local laundry showed the average bill for 200 laundry bundles left by young men to be 78 cents. This relatively small average was attributed by the manager to the fact that the bundles often include only collars and shirts, indicating that the soft laundry is done either by washerwomen or by the men themselves. At the Y. M. C. A., an average of 385 laundry bills in September was \$1.10. Some of these clearly included more than a week's laundry, and the opinion there was that the low-salaried man averaged about 80 cents per week, many of these men washing small articles, such as handkerchiefs and socks, in their rooms.

In view of these indications, it would seem that an average of \$1 per week is about the lowest sum for which a man can have sufficient laundry work done to maintain reasonable cleanliness, and in allowing this sum, moreover, it was assumed either that soft work is done by washerwomen at a lower cost than that of the steam laundries or that the man does some of his laundry work.

Inquiries among woman workers indicate that \$1.25 per week is the lowest average amount which could be allowed for laundry. In the summer when a considerable amount of white clothing is being worn, the laundry expense would doubtless be higher than \$1.25 a week, but in the winter season many woman workers secure their laundry for only \$1 a week, so that an average of \$1.25 seems within reason. It is assumed, of course, that the work will be done by a washer-woman rather than by a steam laundry.

Toilet Supplies.

Toilet supplies and services, man.....	\$15 per year.
Toilet supplies, woman	10 per year.

This group includes for men a long list of items—tooth paste, tooth brush, hand soap, shaving soap and brush, razor, hair brush, comb, shoe polish, and hair cutting. The prevailing price for hair cutting is 50 cents. An average of one hair cut every three weeks would thus amount to \$8.50 per year. For the other items listed, no precise data exist regarding the number of units needed per year. But assuming that a man shaves himself and polishes his own shoes, it would seem that the minimum yearly expense for these items would be at least \$6.50.

For women the item includes expenditures for toothbrushes, toothpaste, toilet soap, shampoo soap, hairbrush, comb, shoe polish, talcum powder, face powder, toilet water, etc.

Health.

Health, man.....	\$32 per year.
Health, woman.....	43 per year.

This item includes expenditures for medical attention in case of sickness, medicines, dentist, and oculist. No information exists regarding the necessary expenses for these purposes by a single man in Government employment or in occupations of analogous character. The investigation of wage-earning women in Washington, made by the Bureau of Labor Statistics in 1916, showed that the average expenditure for these purposes by the group of self-supporting women covered by the investigation was \$22.54 per year. For women with incomes of \$800 or over, however, the average expenditure was approximately \$32 per year; and this sum may be taken as a more accurate measure of the necessary expenditure by wage-earning women at that time, as the maintenance of health is rarely a subject of extravagance, the expenditures tending to rise constantly with increasing income.

The allowance for health for the single woman is \$43. In the absence of data regarding the health expenditures of single men, it

may be assumed as probable that the average man has a smaller expenditure on this item than the average woman. Therefore, the allowance here made for the single man, \$32, the same amount as was spent by single women in 1916, would seem reasonable, as the increase in the cost of all medical service between 1916 and 1919 has probably been at least $33\frac{1}{3}$ per cent. Allowing this rate of increase for women, the necessary cost of maintaining good health is placed at \$43.

Religious Organizations.

Religious organizations----- \$5.20 per year.

Attendance at almost all churches or religious associations involves a practical obligation to make some contribution. The sum of 10 cents per week for this purpose seems a fair minimum in the case of both men and women.

Labor Organizations.

Labor organizations----- \$5 per year.

Membership in labor organization is now so frequent among all classes of workers, including the clerical staff of the Government, that expenditures for this purpose must be recognized. The clerical workers' organization is known as the Federal Employees' Union, the dues being 50 cents a month or \$5 per year in advance. Employees in the mechanical divisions, however, such as machinists, carpenters, printers, etc., affiliate usually with the regular craft unions, where dues are as a rule considerably higher than in the Federal Employees' Union.

Newspapers, Books, and Magazines.

Newspapers----- \$8.40 per year.

Books and magazines----- Nothing.

The reading of a daily newspaper is so customary and so desirable as an incident to intelligent citizenship that an expenditure for this purpose may be regarded as a necessity. The Washington daily papers are not uniform in their subscription rates, the two most expensive costing \$8.40 per year. This sum is here allowed, as the individual should be free to choose the paper he prefers and in any case the difference is not large.

No special provision is here made for the purchase of magazines, books, and other reading matter. It is assumed that the free public libraries can be availed of by those who are seeking to live with close economy. Any special expenses along this line, due to individual tastes, would, under this budget, have to be charged to the amusement and recreation allowance.

Car Fare.

Car fare (744 rides)----- \$37.20 per year.

Although a few single men and women may be fortunate enough to secure a comfortable room sufficiently near their office to render car fare unnecessary, the larger portion of them are obliged to ride to and from their work. In view of this it seems reasonable to allow two car rides per day for each working day, or 600 rides in total.

Some additional car riding, such as that incident to visiting friends and attending lectures, concerts, or movies occasionally is almost inevitable. Therefore a minimum of six round-trip rides per month is allowed for this purpose.

Amusements, Recreation, Etc.

Amusements, recreation, etc., man----- \$39 per year.

Amusements, recreation, etc., woman----- 20 per year.

The average single man, particularly a young man, living in a boarding house, will inevitably feel it necessary to make some expenditures for amusements. Membership in the Young Men's Christian Association probably offers the greatest return of wholesome amusement for the least money. This will cost \$15 per year. In addition, there will be at least occasional outside amusements, such as the moving pictures, excursions, and games. In the case of the normal young man, moreover, there will be the expenses of courtship, which, as a matter of custom and pride, will be paid at the sacrifice of almost anything else.

No data are available for this class of expenditures for men. For women the investigation of the Bureau of Labor Statistics in 1916 developed that the average expenditures for amusements by the wage-earning women covered by that investigation was only \$7.44 per year. This average was unduly low, because the study included a number of women at such very low earnings that they had absolutely no expenditures on amusements of any kind. If these had been eliminated, the average would have been between \$10 and \$12 per year. For the reasons above cited, and particularly because when young men and young women have their amusements together custom prescribes that the man bears the expense, it seems reasonable to assume that the minimum expenditure for amusements should be considerably higher for single men than for single women. In view of this, and in view of the increased costs of most amusements, an allowance of 75 cents a week for this item seems very moderate.

Single women, as a rule, living in boarding houses will feel the necessity for a reasonable amount of amusements. Assuming that some of these expenses will be met by young men, the amount allowed

in this budget need not be very large. However, it seems reasonable that the average young woman will spend at least \$20 a year for amusements and recreation. This figure will provide simple amusement for only about one night a week.

Vacation.

Vacation----- Nothing.

No special provision is here made for vacations. Under the regulations of most Government departments in Washington a reasonable amount of annual leave with pay is granted. This permits a vacation without loss of pay. It is not felt that special provision for the expenses of out-of-town vacations should be regarded as absolutely necessary in a minimum budget of health and decency.

Education.

Educational purposes----- Nothing.

In the case of younger men particularly, it is highly desirable that additional school attendance, such as the law school, business college, and art school should be encouraged. This practice, moreover, is quite common among Government employees. No special allowance for this item, however, is made in the budget on the grounds (1) that such expenditure is normally limited to a rather short period, and (2) that the ambitious man attending school in the evenings almost always effects considerable reduction in the amount of money spent for amusement and vacation.

Incidentals.

Other incidentals, man----- \$26 per year.

Other incidentals, woman----- 20 per year.

This group includes a large number of items which, for the most part, are either inexpensive or of only occasional occurrence; such items, for instance, as stationery, stamps, notebook, pocketbook, occasional use of telephone and telegraph, and tobacco. The only pertinent information on the cost of the miscellaneous items is the study made by the United States Bureau of Labor Statistics of wage-earning women in Washington in 1916. This study showed an average expenditure on other incidentals of about \$15 per year by the wage-earning women with incomes of \$600 or more covered by that investigation. Using this as a guide and allowing for increases in the cost of most articles it would seem reasonable to allow 50 cents a week for this miscellaneous group as a necessary minimum for a single man, and \$20 a year for a single woman.

Savings.

Savings, man	\$96.14 per year.
Savings, woman	103.72 per year.

In the budget proper no provision is made for savings (i. e., bank account, insurance, etc.), it being felt that savings should be regarded rather in the nature of profits than as an item of expense. The importance of savings, whether in the form of a bank deposit, insurance, or property investment, is universally recognized. The only point of dispute is as to the amount that should be considered as essential. An amount equivalent to 10 per cent of living expenses would seem to be very reasonable.

The British National Health Insurance System, 1911-1919.

By HENRY J. HARRIS.

BY THE act of December 16, 1911, which came into operation on July 15, 1912, a system of compulsory health and invalidity insurance was introduced into Great Britain. The following pages summarize the provisions of this act as amended by the legislation of 1913, 1918, and 1919. The Bureau of Labor Statistics purposes in the near future to publish a more complete account of this system, in bulletin form.

Industries and Occupations Included.

The general rule is that the insurance includes all persons, men and women, 16 years of age or over, under any contract of service for which remuneration is paid. The most important limitation on this general rule relates to nonmanual employments. Persons employed at other than manual labor whose annual remuneration exceeds £250¹ are not included. Prior to July 1, 1919, this limitation was £160. Under the present law those whose earnings from employment fall between £160 and £250 may be exempted if they make application before January 1, 1920.

The official Handbook of Approved Societies (1915) sums up the groups required to be insured as follows:

1. Persons in employment by way of manual labor.
2. Persons in any employment at a rate of remuneration not exceeding in value £160 [now £250].
3. Persons engaged in some regular occupation and wholly or mainly dependent for their livelihood on the earnings derived from that occupation and whose total income, including earnings, does not exceed £160 [now £250] per year.
4. One who has been an insured person for five years or upward.
5. One who has been an employed contributor and being of the age of 60 or upward, who shows to the satisfaction of the insurance commissioners (now the Ministry of Health), that he or she has ceased to be insurable as an employed contributor.

¹ Owing to the fluctuation in value of the British pound sterling conversions are not made in this article. Normally the value of the pound sterling is \$4.8665; the shilling, 24.33 cents; the penny, 2.03 cents.

It will be noted that there is now practically no age limit, though pecuniary benefits are not paid after the age of 70 is reached. The employments include agriculture, industry, commerce, transportation, and public service.

The persons exempt from the insurance are those who have rights to sickness and other benefits from certain specified sources, such as railway employees, school-teachers, etc., who are entitled to such benefits from existing funds. Casual employments are exempt unless the employment is in the regular line of the employer's trade or business.

If the person employed within the general terms of the law can prove that (1) he is in receipt of any pension or income of the annual value of £26 or more and not dependent on his personal exertions, or (2) that he is ordinarily and mainly dependent on some other person for his livelihood, or (3) that he is dependent for his livelihood on earnings derived from an occupation which is not employment as already defined, then he may be granted exemption by the authorities.

Voluntary insurance is permissible to persons who are not engaged in any employment which will make them employed persons within the meaning of the law, provided they are engaged in some regular occupation and are wholly or mainly dependent for their livelihood on their earnings from this occupation; such earnings may, however, not exceed £250 annually.

Disability Provided For.

The insurance is intended to provide for inability to work due to some specific disease, or bodily or mental disablement; the pecuniary relief commences with the fourth day of such incapacity, while the medical relief is available from the beginning of sickness. There are two types of disability recognized by the law; first, that usually known as temporary disability; second, that usually termed invalidity. The first is expected to include cases lasting less than six months in a year, and the second, cases of longer duration or even permanent total disability. The system is therefore a combined sickness and invalidity insurance system. The presence of the invalidity feature is responsible for the complicated financial arrangements of the system. Accidental injuries which receive benefits under the Workmen's Compensation Act are not usually included, but disability due to other accidents not covered by the compensation act does entitle to benefits, unless by some legal process compensation or damages equal to or in excess of the regular benefits is secured.

The carriers of the insurance may themselves take steps to secure such compensation or damages.

For the women included in the insurance, provision is made for inability to work on account of childbirth. The uninsured wife of an insured man also receives this benefit.

The Benefits.

The benefits provided by the insurance are divided into two groups—those administered by the insurance committees and those by the “approved societies.”

The insurance committees have charge of: 1. Medical benefit; 2. Sanatorium benefit. The approved societies have charge of cash benefits, as follows: 3. Sickness benefit; 4. Disablement benefit; 5. Maternity benefit; 6. Additional benefits. It will be noted that there is no funeral benefit.

(1) *Medical benefit*.—This consists of such medical treatment as can consistently with the best interests of the patient be properly undertaken by a general practitioner of the usual professional skill. It also includes the provision of medicines and of such medical and surgical appliances as are approved by the regulations issued by the insurance commissioners—that is, by the Ministry of Health. As soon as a person is accepted as a member by an approved society this benefit becomes available without any waiting period. The benefit must be provided immediately on the beginning of the disability.

Voluntary contributors are entitled to medical benefit in the same manner as the regular contributors, but if their annual income exceeds a certain amount, no right to this benefit exists. Their dues, however, are reduced 1 penny weekly.

In the rare cases where the insurance authorities are satisfied that the insured persons in any area are not receiving adequate medical service, they may make special arrangements to provide such service, or they may allow the beneficiaries to provide themselves with service and pay them for the cost of it.

(2) *Sanatorium benefit*.—This consists of treatment in a sanatorium or in a similar institution, or at home, to insured persons suffering from tuberculosis or such other diseases as may be designated by the Ministry of Health (formerly by the Local Government Board). At the present time this benefit is practically a tuberculosis benefit.

(3) *Sickness benefit*.—This consists of a periodical payment to insured persons rendered incapable of work by some specific disease or by bodily or mental disablement of which notice has been given,

commencing on the fourth day of such incapacity and continuing for a period not exceeding 26 weeks. If the disability continues longer than 26 weeks, the disablement benefit (described below) begins. These two benefits cease when the age of 70 is reached, as the old-age pension begins at that age. Sickness benefit is not paid in maternity cases. As some supervision of the beneficiary is required, the sickness benefit is not paid while the patient resides outside of the United Kingdom.

If this benefit is drawn for a period of 26 weeks, application for benefit for another case of sickness will be approved only when at least 12 months have elapsed from the date of last receipt of benefit.

The societies are authorized to refuse or suspend the benefit, if the sickness was caused by misconduct or if recovery is delayed by failure to observe the rules.

The "ordinary" rate of sickness benefit is 10 shillings per week for men and 7 shillings 6 pence per week for women. These rates apply to persons who took out insurance on or before October 13, 1913; those entering after this date are termed "late entrants" and receive lower benefits as described below.

The sickness benefit is payable only after the contributor has been insured 26 weeks and has paid 26 contributions. If a person ceases to be insured and then later again becomes an employed contributor, a waiting period is again required; as the law expresses it "he shall be treated as if he had not previously been an insured person."

The class of insured persons known as "late entrants," i. e., those who became insured after October 13, 1913, are temporarily entitled to reduced benefits only. Until a late entrant has been insured for 104 weeks and has paid that number of weekly contributions, the rates of benefit are: For men, 6 shillings per week; for women, 5 shillings per week.

(4) *Disablement benefit*.—This consists of a periodical payment in case of a disease or disablement which has exhausted the sickness benefit. The rate is 5 shillings per week for men and women alike and continues for the duration of the disablement. A waiting period of 104 weeks, for which a like number of contributions has been paid, is required. The benefit begins on the day after sickness benefit has been exhausted.

(5) *The maternity benefit*.—This consists of a sum of money, payable after contributors have been insured 42 weeks (formerly 26 weeks). An insured man is entitled, on the confinement of his wife, to receive from his society the sum of 30 shillings, the benefit being the wife's property. If the wife is also insured, she is entitled to receive from her society a further sum of 30 shillings, making in all

60 shillings. In order not to place in an unfavorable position the insured woman whose husband is not insured, the double benefit of 60 shillings is paid to her also, in this case the whole amount coming from her society. An unmarried woman is entitled, on confinement, to a benefit of 30 shillings.

The maternity benefit does not carry with it the right to any medical attendance or medicines, nor may the insured woman receive any sickness benefit for four weeks after the date of confinement, unless there is some disease or disablement not connected directly or indirectly with the confinement. However, the model rules issued by the commissioners state "a woman in respect of whom this benefit is payable must be attended in her confinement by a duly qualified medical practitioner or by a midwife possessing the prescribed qualifications."

The 30 shillings benefit paid in respect of a wife's insurance, carries with it the obligation to abstain from remunerative employment for four weeks after the confinement.

In order to make sure that the maternity benefit reaches the widest possible group of insured women, it is payable even though the woman has already exhausted her 26 weeks of sickness benefit or even if she has been suspended from sickness benefit on account of arrears. Similarly, even if the husband is in arrears or is otherwise disqualified, the wife's society must pay the 60 shillings benefit.

An additional aid in maternity cases is provided by section 10 (4) b of the act of 1911, under which no regard is to be taken of arrears of contributions during the two weeks before and four weeks after confinement in the case of an insured married woman. This is equivalent to exemption from contributions for these six weeks.

(6) *Additional benefits.*—Section 37 of the 1911 act provides that where the actuarial valuation of an approved society shows that there is a surplus over liabilities, the society may provide, for its members and their dependents, certain additional benefits. The fourth schedule appended to the 1911 act gives a list of the permissible extensions of benefits. These may be summed up as consisting of increases in the ordinary benefits, especially in cases where a member has dependents, an addition to the old-age pension provided by the act of 1908, grants to members in distress, etc. But no part of such a surplus may be used to pay a funeral benefit.

As the annual reports of the insurance commissioners make no mention of the societies taking any steps in this direction, it may be inferred that none have been instituted. The original act contemplated that such additional benefits could be generally provided after about 18 years of operation of the system, but the changes introduced by the act of 1918 postponed the date of such increases to about 35 years.

Sources of Income.

The funds of the insurance system are derived from three sources: (1) The contributions of the insured person; (2) the contributions of the employer; (3) grants from the national treasury.

Contributions.—The so-called “employed rate” is as follows: The contributions for men are 7 pence weekly, for women 6 pence weekly. This is divided as follows: The man pays 4 pence, the employer 3 pence; the woman pays 3 pence, the employer 3 pence. These rates, it will be noted, are “flat” rates, being uniform for the whole class of “employed contributors.”

“Employed contributors” form the great majority of the insured persons, but there are special groups of so-called “low-wage earners” for whom special provision is made. The rates for insured persons in this category (who must be 21 years of age or over and whose wages must not include board or lodging) are as follows:

RATES OF WEEKLY CONTRIBUTIONS FOR LOW-WAGE EARNERS.¹

Rate of pay per working day.	Amount contributed by—			
	Employer for—		Em- ployee.	Parlia- ment.
	Men.	Women.		
Not more than 1s. 6d.	<i>Pence.</i> 6	<i>Pence.</i> 5	<i>Pence.</i> Nothing.	<i>Pence.</i> 1
Over 1s. 6d. but not more than 2s.	5	4	1	1
Over 2s. but not more than 2s. 6d.	4	3	3	Nothing.

¹ Great Britain. The statutes relating to National Health Insurance. London, June, 1918. p. 69.

Arrears.—The provisions as to arrears are liberal, but are not easy to describe in brief. Arrears due to sickness or disablement and, in the case of woman members, due to maternity, are disregarded in making up the accounts. The general principle is that any loss which a society suffers by the nonpayment of a member's dues in one year shall be made good to the society by the reduction of his benefits in the following year. The arrears of one year are canceled in the next year, even if no benefit is claimed, so that the member in arrears makes, as it were, a fresh start each year. To avoid any reduction of benefits, a member may, at the end of a contribution year, pay off his arrears, but must do so not later than 13 weeks after the end of a contribution year. By the act of 1913, a member who wishes to pay off any arrears which arose during unemployment can do so by paying only that portion of his contribution which fell to his share and not that part which the employer would have paid.

Low-wage earners who are contributors must, in case of arrears, pay the State's contribution of 1 penny per week.

Financial Administration.

The finances of the system are based on a plan of level premiums; that is, the contributions are uniform for all ages regardless of the higher sickness and disablement rates in the older age groups. As this plan provides both sickness and invalidity insurance, the accumulation of a reserve is necessary. This combination makes the plan extremely involved and very difficult to present in brief form.

The weekly dues of 4 pence for men and 3 pence for women are paid by deductions from wages; the employer adds 3 pence to each of these amounts and affixes special stamps of the proper value to the card of the employee on the dates when wages are paid. The stamps are purchased from the post office, which deposits the receipts in the national health insurance fund. From this fund the money is drawn for the payment of benefits and for expenses of administration.

The portion of the expense defrayed by the National Government was, at the start, two-ninths of the cost of benefits and of administration for the men, and one-fourth of these expenditures for the women.

The cost of administration in the societies may not exceed 41 pence per member annually. If there is a deficiency in the administration account, an assessment must be levied on the members.

The rates of dues and the schedule of benefits of the system were computed on the basis of being self-sustaining for a person who entered the insurance at the age of 16; but for a person who entered at a later age the contributions were not considered to be sufficient to provide the benefits. The system thus began with a liability which was estimated as being £87,000,000. To cover this amount each person entering the insurance has credited to him a theoretical credit—called a “reserve value.” At the start this amount was to be made up by setting aside as a sinking fund a portion of the weekly dues of each contributor, as follows: For the men, one and five-ninths pence; for the women, one and one-half pence. By the act of 1918 the deduction in the case of women was made one and one-sixth pence. It was originally estimated that these deductions would cancel the “reserve values” at the end of a period of about 18 years; it is now believed that this period will be somewhat longer than that.

A special committee appointed in 1916 to make a study of the finances of the system reported that the funds available for women's benefits were inadequate, and recommended that part of the deductions just described should be devoted to current expenses. The

1918 law provided (sec. 1) that part of the sums should be applied to the accumulation of two special funds—the central fund and the contingencies fund; the central fund is to receive one-eighth and the contingencies fund seven-eighths “of a sum representing, in the case of men, four-ninths and in the case of women three-ninths pence for each weekly contribution paid in respect of a member of a society.”

The central fund is intended to meet any deficit arising out of an abnormal rate of sickness. It receives in addition to the above-mentioned sum, and the interest which has accumulated on it, a sum of £150,000 annually from Parliament.

In general it may be said that the purpose of the contingencies fund is to meet any deficit which appears when an actuarial valuation is made; however, the amounts apportioned to any one society belong to the credit of that society and may not be used to meet a deficit in any other society.

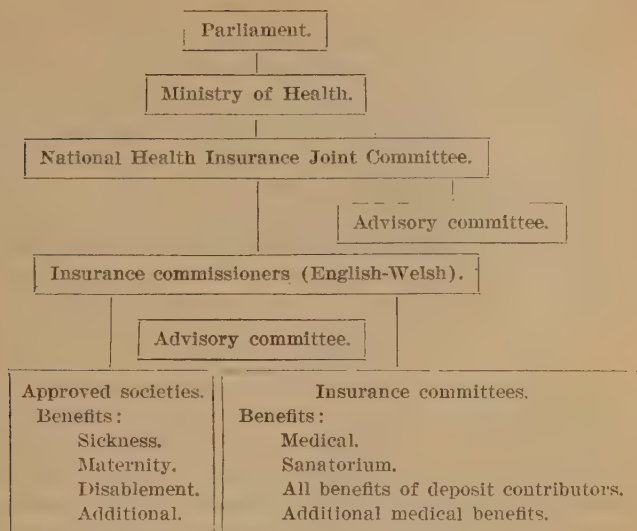
Besides these two funds, the 1918 act also creates a women's equalization fund, to be used in assisting societies in meeting their liabilities arising out of the sickness claims of women. It is distributed to the societies pro rata on the basis of the number of married woman members. It is understood that Parliament will grant each year in addition to its weekly contribution of 2 pence for each insured woman, the sum of £250,000 for this purpose. In general, it may be said that this fund is to meet the disabilities due to child-bearing.

General Administration.

The Ministry of Health Act of June 3, 1919, made a number of important changes in the administration of the insurance system. This act, as far as it applies to health insurance, is now in force and other powers are being added to it from time to time. The powers and duties of the new ministry include the supervision and administration of the entire insurance system.¹

The general organization of the health insurance system for England and Wales is shown in the following outline. A similar organization obtains for Scotland and for Ireland, where the Scottish insurance commissioners and the Irish insurance commissioners take the place of the insurance commissioners for England and Wales (now a subdivision of the Ministry of Health).

¹ A summary of the act is given in the MONTHLY LABOR REVIEW for August, 1919, pp. 227, 228. The text of the act is given in Public Health Reports, Oct. 10, 1919, pp. 2233-2241.



National Health Insurance Joint Committee.

Prior to June, 1919, the system was in the charge of four bodies known as insurance commissioners, there being one each for England, Scotland, Wales, and Ireland. Over these four boards was an organization composed of representatives of each, called the National Health Insurance Joint Committee, a federated body whose principal function was to take charge of all matters common to the four boards, especially the actuarial problems.

By the terms of the Ministry of Health Act, the joint committee will in the future be composed of the Minister of Health as chairman, the Secretary for Scotland, the Chief Secretary for Ireland, and one other person appointed by the minister to represent the Welsh insurance system. Except for this change of personnel, the previous constitution of the joint committee and its rights and duties are unchanged. All of the powers and duties formerly belonging to two of these bodies, the insurance commissioners for England and the insurance commissioners for Wales, are henceforth to be exercised by the Ministry of Health, and all their employees are transferred to the new ministry. The act specifically provides that it does not affect the powers and duties of the Irish insurance commissioners. The Scottish insurance commissioners also are not affected to any material extent.

The most important work carried on by the joint committee is that relating to the actuarial features of the insurance; this includes, for

instance, the calculation of the rates of contributions, reserve values, etc. An actuarial advisory committee has aided the joint committee since the commencement of the act.

Until the passage of the Ministry of Health Act, there was attached to the joint committee a special committee on medical research, to make special investigations on matters relating to any disease to which the insured persons are subject. The expense of these investigations is provided for by special appropriations by Parliament, the amount of 1 penny per insured person being granted. In the future this research committee is to be entirely independent of the insurance system.

Insurance Commissioners.

In the future, the administration will be divided into three parts, one for England and Wales, and one each for Scotland and Ireland.

The insurance commissioners (now a subdivision of the Ministry of Health), as the board for England has always been entitled, may be used as typical in describing the scope and organization of these bodies. The commissioners may appoint such officers, inspectors, and other employees as they see fit, subject to certain supervision of the higher authorities; they may sue and be sued and hold property. They have authority to issue regulations authorized by the insurance laws; they approve the statutes and supervise the administration of the approved societies.

The commissioners have an advisory committee to give advice and assistance in making regulations for the administration of the laws; this committee consists of representatives of the employers, of the approved societies, of the medical profession, and of such other persons as the commissioners may appoint, of whom at least two must be women. The advisory committee has a membership of about 150 persons, and a large proportion of the membership of the English committee consists of persons who are also members of the advisory committee of the National Health Insurance Joint Committee.

Approved Societies.

When the plans for the health insurance system were formulated, the United Kingdom was covered by a network of friendly societies, trade-unions, commercial insurance companies, sick clubs, establishment funds, and similar voluntary organizations which provided a variety of benefits for sickness, accidental injury, superannuation, etc. Many of these organizations had a long history of usefulness in providing relief for distress from these causes, and it was decided to use the societies as the carriers of the pecuniary benefits. The in-

insurance laws therefore provide that the insured persons shall group themselves into self-governing bodies—the organizations just named—which shall be responsible for the administration to their members of the pecuniary benefits provided by the system. These societies, if they meet the requirements of the law, are recognized by the insurance commissioners as “approved societies.” The general requirements are that the society shall be self-governing, not conducted for profit, and generally be in a position to carry out the provisions of the law. In order to permit any organization to continue such activities as are not covered by the law, the societies may have a special section for administering the provisions of the insurance acts, whose accounts must be kept separate from other activities. Special arrangements are made for federating societies whose membership is not large enough to provide an adequate basis to carry the risks of an influenza epidemic or similar tax on their resources. These societies were required to enact by-laws which were submitted to the commissioners for approval and which complied with the general scheme of administration. They could accept such members as they saw fit, except that they could not reject an applicant solely on account of age.

A person may not be a member of more than one society for the purpose of State insurance.

The principal functions of the approved societies are the payment of cash benefits, the keeping of records of the members, and the supervision of beneficiaries.

The distribution of the insured persons among the various types of approved societies is shown in the following table, which gives the membership in England in April, 1913, the latest date for which this information has been reported:

MEMBERSHIP OF APPROVED SOCIETIES OF SPECIFIED TYPE IN ENGLAND, FOR THE QUARTER ENDING APR. 13, 1913.¹

Sex.	Total number of members. ²	Number of members of societies formed by—					
		Friendly societies with branches.	Other friendly societies.	Trade-unions.	Collecting societies.	Industrial assurance companies.	Employers' provident funds.
Men.....	7,279,368	1,877,051	1,816,266	948,885	396,103	2,162,396	78,665
Women.....	3,253,852	1,510,888	652,379	205,599	267,554	1,597,600	20,432
Total.....	10,533,220	2,387,939	2,468,645	1,154,484	663,657	3,759,996	99,097

¹ Great Britain. National Health Insurance Joint Committee. Report for 1913-14 on the administration of the National Insurance Act (Cd. 7496), p. 498.

² The total number of members is the number of members whose contribution cards had been forwarded to the commission in time for use in making up its report.

Insurance Committees.

For each county and county borough of the United Kingdom there is a body called an insurance committee, which has charge of the medical and sanatorium benefits. The members of these committees in England and Wales are appointed by the Ministry of Health. The committees must be composed of not less than 40 nor more than 80 members, consisting of representatives of the insured persons, of the county government, of the medical profession, and other persons appointed by the Ministry of Health.

Each committee must make such arrangements with duly qualified medical practitioners in the county as will assure to the insured persons adequate medical attendance and treatment. The committee prepares a list of doctors who are willing to attend insured persons and this list, called the "panel," must be duly published. Usually it is displayed in each post office as well as distributed among the insured persons. Each of the latter may select from the panel the doctor whom he desires for his physician.

The committee must also prepare and publish lists of persons or firms who are willing to supply drugs, medicines, and appliances to insured persons in accordance with regulations made by the authorities. The committee must make in advance an agreement with the druggists ("chemists") as to the schedule of prices for drugs, etc., subject to the approval of the authorities.

The administration of the sanatorium benefit was originally in the hands of the committees entirely; later, special grants were made by Parliament to various local organizations engaged in combating tuberculosis, but since the enactment of the Ministry of Health law, all this work has been placed in charge of the ministry. Under the insurance law of 1911, the insurance committees are allowed 1 shilling 3 pence annually per insured person in their areas for the purposes of the sanatorium benefit. It is understood that Parliament will make special grants from time to time to promote the construction of sanatoriums for the use of the whole population. In 1911 the finance act provided for this purpose £1,500,000, which was distributed among the four countries on the basis of population. The local government authorities and the National Treasury each defray one-half of the deficit arising from the extension of this benefit to dependents of insured persons. This part of the original plan was modified by having the National Government's grant made directly to the local authorities in a given area, instead of to the insurance committee.

Under the present arrangement, therefore, the Ministry of Health has the per capita allowance from the national health insurance fund

in addition to grants from local government bodies and from the National Treasury for this purpose. Up to the end of 1917, in 32 of the 49 counties of England and in 55 of the 78 county boroughs of England, comprehensive agreements were in force between insurance committees and the local authorities, under which treatment in approved sanatoriums (for indoor patients) and the services of a tuberculosis dispensary organization for nonresident patients (including dispensary treatment and the services of a tuberculosis health officer for examining applicants for sanatorium benefit, advising as to the treatment, etc.) were provided for the insurance committee by the local authorities. In addition to the services just mentioned, most of the agreements provide for visiting and nursing services.

Under the plans above mentioned there has been a marked increase in the facilities available for tuberculosis treatment by the insurance committees. In June, 1914, the number of approved tuberculosis dispensaries was 255 and the number of beds in approved residential institutions was 9,200; in August, 1917, the dispensaries numbered 370 and the number of beds had increased to 11,700. This increase was made in spite of the many difficulties caused by the war.

Deposit Contributors' Fund.

As the societies could reject an applicant for any reason except age, it was expected that there would be a number of persons who, on account of ill health or other reason, could not obtain membership. For this group a special organization, "the deposit contributors' fund" (originally called the post-office fund), was created. It was expected that this fund would have close to a million members, but at the close of the year 1916, the number was only about 270,000.

The deposit contributors are entitled to such benefits as the sum to their credit will provide. They may, for instance, draw sickness benefit only until they have exhausted the amount standing to their credit. Such contributors are in a distinctly less favorable position than the regular contributors.

Operations of the System.

Three reports on the operations of the system have been published; one for the year 1912-13, one for 1913-14, and one for 1914-1917. This last report was printed in 1918, while the war was still in progress, and for reasons of public policy gave no data as to membership. The data in these reports are given separately for each of the four countries and not always in the same form for all countries. The

following table shows the total receipts and expenditures of the English national health insurance fund, 1912 to 1916:

RECEIPTS AND EXPENDITURES OF THE NATIONAL HEALTH INSURANCE FUND OF ENGLAND, 1912 TO 1916.¹

Period.	Receipts.			Expenditures.		
	£	s.	d.	£	s.	d.
July 15, 1912, to Jan. 11, 1914.....	26,661,618	15	7	14,360,746	11	5
Jan. 12 to Dec. 31, 1914.....	18,335,962	11	11½	18,071,611	16	2
1915.....	20,438,129	7	3½	20,159,712	4	10
1916.....	19,016,790	0	6½	18,881,840	19	1½

¹ Great Britain. National Health Insurance Joint Committee. Report for 1913-14 on the administration of national health insurance (Cd. 7496), p. 503. National Health Insurance Fund Accounts for period Jan. 12 to Dec. 31, 1914. H. of C. Paper 38 of 1917, p. 2. National Health Insurance Joint Committee Report on the administration of national health insurance during the years 1914-1917 (Cd. 8890), p. 256.

The following table shows the membership, the total expenditure for benefits by the approved societies, and the expenditure per member for pecuniary benefits in the four countries:

NUMBER OF MEN AND WOMEN INSURED IN APPROVED SOCIETIES IN THE UNITED KINGDOM AND AMOUNTS PAID FOR SICKNESS, MATERNITY, AND DISABLEMENT BENEFITS, 1913-1916.¹

Year.	Number of members.	Amount paid for—				Average amount paid per member per week for—			
		Sickness benefits.	Maternity benefits.	Disablement benefits. ²	All benefits.	Sickness benefits.	Maternity benefits.	Disablement benefits. ²	All benefits.
1913.	£	£	£	£	£	Pence.	Pence.	Pence	Pence.
Men.....	9,394,961	4,338,112	1,222,647	(²)	5,610,759	2.16	0.60	(²)	2.76
Women.....	4,053,108	2,166,575	42,909	(²)	2,209,484	2.46	.05	(²)	2.51
1914.									
Men.....	9,625,562	5,083,736	1,259,339	146,118	6,489,493	2.43	.60	0.07	3.10
Women.....	4,131,825	2,126,736	210,913	45,762	2,383,411	2.37	.23	.05	2.65
1915.									
Men.....	(³)	4,647,769	1,136,395	589,922	6,374,086	2.22	.54	.28	3.04
Women.....	(³)	1,656,173	182,503	251,727	2,090,403	1.81	.20	.28	2.32
1916.									
Men.....	(³)	4,366,189	1,089,138	770,022	6,225,349	2.06	.51	.36	2.93
Women.....	(³)	1,426,542	171,130	375,967	1,973,639	1.56	.19	.41	2.16

¹ Great Britain. National Health Insurance Joint Committee Report on the administration of national health insurance during the years 1914-1917 (Cd. 8890), pp. 11 and 238.

² Disablement benefit payments began in July, 1914.

³ Not reported.

The general appropriations out of the National Treasury to the insurance system are made to the National Health Insurance Joint Committee. These have been as follows:

APPROPRIATIONS TO THE NATIONAL HEALTH INSURANCE JOINT COMMITTEE
FOR THE FISCAL YEARS 1912-13 TO 1919-20.¹

Year.	Amounts appropriated.	Year.	Amounts appropriated.
1912-13.....	£37,570	1916-17.....	£208,709
1913-14.....	207,227	1917-18.....	269,746
1914-15.....	1,218,964	1918-19.....	636,798
1915-16.....	618,275	1919-20 ²	1,064,605

¹ Great Britain. Treasury. Estimates for civil services, 1914-1920.² Estimates for 1920.

INDUSTRIAL RELATIONS.

Preliminary Statement of President's Industrial Conference.

ON November 20 the President announced the appointment of a group of seventeen to sit as an Industrial Conference, beginning December 1. This call was in accordance with the suggestion of the public group in the recent industrial conference summoned by the President in October.¹

The President's letter of appointment reads as follows:

In accordance with the suggestion given me by the public group of the recent industrial conference I am calling a new body together to carry on this vitally important work, and I trust you will give me the pleasure of naming you as one of its members.

Guided by the experience of the last conference, I have thought it advisable that in this new body there should be no recognition of distinctive groups, but that all of the new representatives should have concern that our industries may be conducted with such regard for justice and fair dealing that the workman will feel himself induced to put forth his best efforts, that the employer will have an encouraging profit, and that the public will not suffer at the hands of either class. It is my hope that this conference may lay the foundation for the development of standards and machinery within our industries by which these results may be attained.

It is not expected that you will deal directly with any conditions which exist to-day, but that you may be fortunate enough to find such ways as will avoid the repetition of these deplorable conditions.

The conference will meet at a place to be hereafter designated in this city on December 1 next.

The new Conference has been meeting in secret session. Its membership consists mainly of citizens prominent in public life, many of whom are well known in political circles. Hon. Wm. B. Wilson, Secretary of Labor, was made chairman, and Herbert Hoover, former Food Administrator, was elected vice chairman. The other members are Thomas W. Gregory, former Attorney General under President Wilson; George W. Wickersham, Attorney General in the Taft administration; Oscar S. Straus, Secretary of Commerce and Labor in the Roosevelt administration; Henry M. Robinson, former member of the Shipping Board and recently appointed a member of the Bituminous Coal Wage Commission; Prof. Frank W. Taussig, former chairman of the Tariff Commission; ex-Govs.

¹ For an account of this conference see MONTHLY LABOR REVIEW for November, 1919, pp. 40-49.

Samuel W. McCall (of Massachusetts), Martin H. Glynn (of New York), and Henry Carter Stuart (of Virginia); William O. Thompson, president of Ohio State University; George T. Slade, railway official of St. Paul, Minn.; Julius Rosenwald, president of Sears, Roebuck & Co., Chicago, Ill.; Owen D. Young, lawyer, vice president of the General Electric Co.; Henry J. Waters, president of the Kansas State Agricultural College; Stanley King, lawyer, secretary of the W. H. McElwain Co. (shoe manufacturers) and former assistant to the Secretary of War in handling industrial relations for that department; and Richard Hooker, of the Springfield (Mass.) Republican.

The preliminary statement of the Conference, which was issued on December 29, 1919, consists principally of an outline or proposal of a system of Federal administrative machinery for the adjustment of industrial relations. It omits any extended statement of industrial principles and theories, and its proposed machinery of adjustment does not displace or interfere with any existing machinery. Briefly the suggestions of the Conference provide for the establishment of a national industrial tribunal and regional boards of investigation and adjustment. If either or both sides to a controversy refuse to designate representatives, the tribunal may function as a board of inquiry under the chairman and four members of the panels set up. The tribunals and boards proposed function along geographical lines and not along lines of industry. The proposals of the Conference do not affect in any way industrial relations in the shop or the establishment, except in so far as appeal is made from the latter for the services of adjustment of the tribunal or regional boards.

The appointment of the members of the proposed tribunal and boards is concentrated in the hands of the President and the Senate.

"The plan which follows," the Conference states, "does not propose to do away with the ultimate right to strike, to discharge, or to maintain the closed or the open shop."

A part of the preliminary report of the Conference is a statement of its views as to the relation of public utility and Government employees to the proposed scheme of adjustment of industrial relations. In public utilities the Conference holds it essential that there should be "some merging of responsibility for regulation of rates and services and the settlement of wages and conditions of labor." It would deny to Government employees engaged in the administration of justice or the maintenance of public safety or order "to join or retain membership in any organization which authorizes the use of the strike or which is affiliated with any organization which authorizes the strike."

The report of the Conference is reproduced in full:

Preliminary Statement of Industrial Conference.

I. Introduction.

The Industrial Conference, convened by the President in Washington on December 1, issues this statement in the desire that certain tentative proposals be given considerate study by interested individuals and organizations throughout the country. It will reassemble on January 12 and will then carefully consider any constructive criticisms that may be submitted to it.

The Conference does not deem it useful at this time to enter upon a discussion of the causes of industrial unrest. It believes rather that its most important immediate contribution is the suggestion of practical measures which will serve to avert or postpone industrial conflicts.

In confining itself to the proposal of machinery for the adjustment of disputes, the Conference is far from wishing to exaggerate the importance of the mechanical as contrasted with the human elements in the situation. Our modern industrial organization, if it is not to become a failure, must yield to the individual a larger satisfaction with life. It makes possible a greater production of material things. But we have grown so accustomed to its complexity that we are in danger of forgetting that men are to-day more dependent on each other than ever before. The spirit of human fellowship and responsibility was easier to maintain when two or three worked side by side and saw the completed product pass from their hands. Yet their cooperation was actually less necessary because each by himself was more nearly capable, if circumstances demanded, to meet the needs of life. To-day we have a complex interweaving of vital interests. But we have as yet failed to adjust our human relations to the facts of our economic interdependence. The process toward adjustment, though slow, nevertheless goes on. The right relationship between employer and employee in large industries can only be promoted by the deliberate organization of that relationship. Not only must the theory that labor is a commodity be abandoned, but the concept of leadership must be substituted for that of mastership. New machinery of democratic representation may be erected to suit the conditions of present industry and restore a measure of personal contact and a sense of responsibility between employer and employee. The more recent development of such machinery with the cooperation of organized labor is a hopeful sign. But back of any machinery must be the power which moves it. Human fellowship in industry may be either an empty phrase or a living fact. There is no magic formula. It can be a fact only if there is continuous and sincere effort for mutual understanding and an unflinching recognition that there is a community of interest between employer and employee.

Pending the growth of better relationships between employers and employees, the practical approach to the problem is to devise a method of preventing or retarding conflicts by providing machinery for the adjustment of differences. The Conference believes that it is possible to set up a more effective series of tribunals for the adjustment of disputes than at present exists. To be successful, such tribunals must be so organized as to operate promptly as well as impartially. There must be full participation by employers and employees. There must be representation of the public to safeguard the public interest. The machinery should not be used to promote unfairly the interests

of organizations, either of labor or of capital. The plain fact is that the public has long been uneasy about the power of great employers; it is becoming uneasy about the power of great labor organizations. The community must be assured against domination by either. On the other hand, there must be equal assurance that such machinery will not be used to discriminate against organizations of employees or of employers. Both should be protected. The right of association on either side should not be affected or denied as a result of the erection of such tribunals.

The plan which follows does not propose to do away with the ultimate right to strike, to discharge, or to maintain the closed or the open shop. It is designed to bring about a frank meeting of the interested parties and cool and calm consideration of the questions involved, in association with other persons familiar with the industry.

The plan is national in scope and operation, yet it is decentralized. It is different from anything in operation elsewhere. It is based upon American experience and is designed to meet American conditions. To facilitate discussion, the plan submitted, while entirely tentative, is expressed in positive form and made definite as to most details.

II. Plan for boards of inquiry and adjustment.

1. *National tribunal and regional boards.*—There shall be established a National Industrial Tribunal, and Regional Boards of Inquiry and Adjustment.

2. *National Industrial Tribunal.*—The National Industrial Tribunal shall have its headquarters in Washington, and shall be composed of nine members chosen by the President and confirmed by the Senate. Three shall represent the employers of the country and shall be appointed upon nomination of the Secretary of Commerce. Three shall represent employees and shall be appointed upon nomination of the Secretary of Labor. Three shall be representatives of the public interest. Not more than five of the members shall be of the same political party.

The tribunal shall be, in general, a board of appeal. Its determinations on disputes coming to it upon an appeal shall be by unanimous vote. In case it is unable to reach a determination, it shall make and publish majority and minority reports which shall be matters of public record.

3. *Industrial regions.*—The United States shall be divided into a specified number of industrial regions. The Conference suggests 12 regions with boundaries similar to those established under the Federal Reserve system, with such modifications as the industrial situation may make desirable.

4. *Regional chairmen and vice chairmen.*—In each region the President shall appoint a regional chairman. He shall be a representative of the public interest, shall be appointed for a term of three years and be eligible for re-appointment.

Whenever in any industrial region, because of the multiplicity of disputes, prompt action by the Regional Board is impossible, or where the situation makes it desirable, the National Industrial Tribunal may in its discretion choose one or more vice chairmen and provide for the establishment under their chairmanship of additional regional boards.

5. *Panels of employers and employees for regional boards.*—Panels of employers and employees for each region shall be prepared by the Secretary of Commerce and the Secretary of Labor, respectively, after conference with the

employers and employees, respectively, of the regions. The panels shall be approved by the President.

At least 20 days before their submission to the President provisional lists for the panels in each region shall be published in such region.

The panels of employers shall be classified by industries; the panels of employees shall be classified by industries and subclassified by crafts. The names of employers and employees selected shall be at first entered on their respective panels in an order determined by lot.

The selection from the panels for service upon the Regional Boards shall be made in rotation by the regional chairman; after service the name of the one so chosen shall be transferred to the foot of his panel.

6. *Regional Boards of Adjustment.*—Whenever a dispute arises in a plant or group of plants which is not settled by agreement of the parties or by existing machinery, the chairman may on his motion, unless disapproved by the National Industrial Tribunal, and shall at the request of the Secretary of Commerce or the Secretary of Labor or the National Industrial Tribunal, request each side concerned in such dispute to submit it for adjustment to a Regional Board of Adjustment. To this end each side shall, if willing to make such submission, select within not less than two nor more than seven days, at the discretion of the chairman, a representative. Such selection shall be made in accordance with the rules and regulations to be laid down by the National Industrial Tribunal for the purpose of insuring free and prompt choice of the representatives.

When both sides shall have selected their representatives the chairman shall take from the top of the panels for the industry concerned, or in the case of employees for the craft or crafts concerned, names of employers and employees, respectively. The representatives selected by the two sides shall be entitled to a specified number of peremptory challenges of the names so taken from their respective panels. When two unchallenged names of employers and employees shall have been selected in this manner, they, with the chairman and the representatives selected by the two sides, shall constitute a Regional Board of Adjustment.

The appointment of representatives of both sides shall constitute an agreement to submit the issue for adjustment and further shall constitute an agreement by both sides that they will continue, or reestablish and continue, the status that existed at the time the dispute arose.

The Board of Adjustment so constituted shall proceed at once to hear the two sides for the purpose of reaching a determination. Such determination must be by unanimous vote. In case the board is unable to reach a determination the question shall, unless referred to an umpire as provided in section 9, pass upon appeal to the National Industrial Tribunal.

7. *Regional boards of inquiry.*—If either side to the dispute fails, within the period fixed by the chairman, to select its representative, the chairman shall proceed to organize a Regional Board of Inquiry. Such Regional Board of Inquiry shall consist of the regional chairman, two employers selected in the manner specified from the employers' panel, and two employees selected in like manner from the employees' panel and of the representative of either side that may have selected a representative and agreed to submit the dispute to the board. If neither side shall select a representative within the time fixed by the chairman, the Board of Inquiry shall consist of the chairman and the four panel members only.

Upon the selection of a representative, within the specified time, the side concerned shall be entitled to the specified number of peremptory challenges as

provided above. The representative shall have the right to sit on the Board of Inquiry and to take full part as a member of such board in the proceedings thereof.

The Board of Inquiry as so constituted shall proceed to investigate the dispute and make and publish a report, or majority and minority reports, of the conclusions reached, within 5 days after the close of its hearings, and within not more than 30 days from the date of issue of the original request by the chairman to the two sides to the dispute, unless extended on unanimous request of the board or the National Industrial Tribunal. It shall transmit copies of this report or reports to the Secretaries of Commerce and of Labor, respectively, and to the National Industrial Tribunal, where they shall be matters of public record.

8. *Transformation of the regional boards of inquiry into regional boards of adjustment.*—At any time during the progress of the inquiry at which both sides shall have selected representatives and agreed to submit the dispute for adjustment, the Board of Inquiry shall become a Board of Adjustment by the admission to membership on the board of such representatives. The side or sides which appoint representatives after the date fixed in the original request of the chairman shall, because of its delay, suffer a reduction in the number of peremptory challenges to which it otherwise would have been entitled.

The Board of Adjustment so constituted shall proceed to the determination of the dispute as though it had been organized within the period originally fixed by the chairman.

9. *Umpire.*—When a Regional Board of Adjustment is unable to reach a unanimous determination it may by unanimous vote select an umpire and refer the dispute to him with the provision that his determination shall be final and shall have the same force and effect as a unanimous determination of such Regional Board.

10. *Combination of regions.*—Whenever the questions involved in a dispute extend beyond the boundaries of a single region, the regions to which the dispute extends shall, for the purpose of such dispute, be combined by order of the National Industrial Tribunal, which shall designate the chairman of one of the regions concerned to act as chairman in connection with the dispute in question.

Two employer members and two employee members shall be chosen from the combined panels of the regions involved in the dispute, under rules and regulations to be established by the National Industrial Tribunal. The members representing the two sides to the dispute shall be chosen as in the case of a dispute in a single region.

A Regional Board of Inquiry or of Adjustment constituted for a dispute extending beyond the boundaries of a single region shall have the same rights and powers conferred upon a Regional Board for a single region.

11. *Effect of decision.*—Whenever an agreement is reached by the parties to a dispute or a determination is announced by a Regional Board of Adjustment, or by an Umpire, or by the National Industrial Tribunal, the agreement or determination shall have the full force and effect of a trade agreement, which the parties to the dispute are bound to carry out.

12. *General provisions.*—In connection with their task of inquiry and adjustment, the Regional Boards and the National Tribunal shall have the right to subpoena witnesses, to examine them under oath, to require the production of books and papers pertinent to the inquiry, and their assistance in all proper ways to enable the boards to ascertain the facts in reference to the

causes of the dispute and the basis of a fair adjustment. Provision shall be made by law for the protection of witnesses and to prevent the misuse of any information so obtained.

All members of the tribunal and boards heretofore described, including the chairman and vice chairman, shall be entitled to vote.

The President shall have the power of removal of the members of the tribunal and boards.

In the presentation of evidence to the tribunal and the boards each side shall have the right to present its position through representatives of its own choosing.

The Secretary of Commerce and the Secretary of Labor in making nominations for the National Industrial Tribunal and in preparing and revising the regional panels of employers and employees shall from time to time develop suitable systems to insure their selections being truly representative.

The National Industrial Tribunal, the Regional Boards of Adjustment, and the Umpires shall in each of their determinations specify the minimum period during which such determinations shall be effective and binding. In case of emergency a Regional Adjustment Board or the National Industrial Tribunal may, after hearing both sides, alter its determination by abridging or extending the period specified.

13. Special provisions.—The terms of office of members of the National Industrial Board shall be six years; at the outset three members, including one from each group, shall be appointed for a term of two years, three members for a term of four years, and three members for a term of six years; thereafter three members, one from each group, shall retire at the end of each period of two years. Members shall be eligible for reappointment.

The regional panels provided for in section 5 shall be revised annually by the Secretaries of Commerce and of Labor, respectively, in conference with the employers and employees, respectively, of each region.

14. Relation of boards to existing machinery for conciliation and adjustment.—The establishment of the National Industrial Tribunal and the Regional Boards described shall not affect existing machinery of conciliation, adjustment, and arbitration established under the Federal Government, under the governments of the several States and Territories or subdivisions thereof, or under mutual agreements of employers and employees.

Any industrial agreement made between employers and employees may, by consent of the parties, be filed with the National Industrial Tribunal. Such filing shall constitute agreement by the parties that in the event of a dispute they will maintain the status existing at the time the dispute originated until a final determination, and that any dispute not adjusted by means of the machinery provided through the agreement shall pass on appeal to the National Industrial Tribunal for determination, as in the case of a dispute submitted on appeal from a Regional Board.

III. Objects of plan.

The main objects of the above plan are to secure national coordination and to stimulate the formation of bodies for local adjustment. The requirement of unanimity of agreement has by experience in the United States proved remarkably successful and should assure such confidence that neither side can rightfully refuse to submit to adjustment. A precedent condition of such submission is that the interruption of production shall be delayed. The frank

meeting of the parties in controversy together with other men skilled in questions at issue always gives promise of settlement. On the other hand, refusal to submit to the board not only inaugurates a legal inquiry but also prejudices the obstinate party or parties in public opinion. Moreover, the fact that membership on the board of inquiry is available to either party or to the conflict singly would tend further to weaken the position of the other. When both parties join, the board at once becomes a Board of Adjustment, and conflict ceases by agreement until a determination is reached. -

IV. Statement as to public utility industries.

The plan here proposed presents greater difficulties in application to certain public utilities than to competitive industry. The continuous operation of public utilities is vital to public welfare. As the capital invested is employed in public use, so is the labor engaged in public service; and the withdrawal of either with the result of suspending service makes the people the real victim. While continuous operation of all utilities is conducive to the general convenience of the people, that of some of them is essential to their very existence. Of the latter class the railways are a conspicuous example and bear the same relation to the body politic as do the arteries to the human body. Suspension produces practical social and economic anarchy and may impose hardship even to the point of starvation upon large sections of the community. The interruption in such essential public utilities is intolerable.

The Conference believes that a plan of tribunals or Boards of Adjustment and Inquiry should be applied to public utilities, but in the adaptation of the plan two problems present themselves. First, governmental regulation of public utilities is now usually confined to rates and services. The Conference considers that there must be some merging of responsibility for regulation of rates and services and the settlement of wages and conditions of labor. Such coordination would give greater security to the public, to employee, and to employer. Second, is the problem whether some method can be arrived at that will avert all danger of interruption to service. These matters require further consideration before concrete proposals are put forward.

V. Statement as to Government employees.

The Government is established in the interests of all the people. It can be conducted effectively only by those who give to its service an undivided allegiance. The terms and conditions of employment in the Government service are prescribed by law. Therefore no interference by any group of Government employees, or others, with the continuous operation of Government functions through concerted cessation of work or threats thereof can be permitted.

The right of Government employees to associate for mutual protection, the advancement of their interests, or the presentation of grievances can not be denied, but no such employees who are connected with the administration of justice or the maintenance of public safety or public order should be permitted to join or retain membership in any organization which authorizes the use of the strike or which is affiliated with any organization which authorizes the strike.

The Conference is not now expressing an opinion upon the propriety of the affiliation of other classes of Government employees with organizations which authorize the use of the strike.

The principles above stated are not to be construed as inconsistent with the right of employees individually to leave the public service. It is, further, an essential part of the application of these principles that tribunals shall be established for prompt hearing of requests and prompt remedy of grievances. The legislation of the Nation, the States, and the municipalities should be improved in such a way as to prevent delay in hearings and to enable speedy action when there are grievances.

VI. Further work of the Conference.

On reconvening the Conference will continue its consideration of tribunals for the furtherance of industrial peace in general industry in the light of whatever criticisms and suggestions the publication of its tentative plan may call forth. It will receive reports of investigations that are being made for it. On the basis of such reports and of further study of these and the other subjects within its field, the Conference hopes that it may be able to contribute something more toward the better industrial relations described in the words addressed to it by the President when he called it into being—relations in which "the workman will feel himself induced to put forth his best efforts, the employer will have an encouraging profit, and the public will not suffer at the hands of either class." To this end it invites the cooperation of all citizens who have at heart the realization of this ideal of a better industrial civilization.

THE PRESIDENT'S INDUSTRIAL CONFERENCE.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

THE retail prices of 22 articles¹ of food combined showed an increase of 2 per cent in the United States on November 15, 1919, as compared with October 15, 1919. The increase in November as compared with the average for the year 1913 was 92 per cent, the same percentage of increase that was shown in August. These two months represent the greatest increase shown during the 6-year period.

Of the 44 articles for which comparison can be made during the month period, 22 increased in price. The articles which increased during the month from October to November were: Strictly fresh eggs, 13 per cent; onions and sugar, 10 per cent each; raisins, 9 per cent; butter, 6 per cent; storage eggs and prunes, 4 per cent each; canned salmon, fresh milk, and potatoes, 3 per cent each; rice and bananas, 2 per cent each; evaporated milk, oleomargarine, cheese, lard, Crisco, bread, flour, and macaroni, 1 per cent each; tea and coffee, less than five-tenths of 1 per cent.

Nut margarine, corn meal, rolled oats, corn flakes, Cream of Wheat, cabbage, canned peas, and canned tomatoes remained at the same price as in October.

The following articles decreased in price: Pork chops, 5 per cent; ham, 4 per cent; bacon, 3 per cent; round steak, plate beef, hens, navy beans, and oranges, 2 per cent each; sirloin steak, rib roast, chuck roast, lamb, baked beans, and canned corn, 1 per cent each.

The 22 articles combined showed an increase of 5 per cent for November, 1919, as compared with November, 1918.

The articles which increased during the year period, November, 1918, to November, 1919, were: Onions, 73 per cent; prunes, 64 per cent; coffee, 55 per cent; raisins, 44 per cent; rice, 26 per cent; potatoes, 18 per cent; sugar, 16 per cent; canned salmon and storage eggs, 14 per cent each; butter, 13 per cent; flour, 10 per cent; strictly fresh eggs, 9 per cent; fresh milk, cheese, and lard, 6 per cent each; tea, 5 per cent; bread, 4 per cent; and corn meal, 2 per cent. The articles which decreased were: Navy beans, 24 per cent; plate beef, 18 per cent; bacon, 13 per cent; chuck roast, 12 per cent; round steak and rib roast, 6 per cent each; lamb, 5 per cent; ham, 4 per cent; sirloin steak and pork chops, 3 per cent each; and hens less than five-tenths of 1 per cent.

¹ Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, tea.

AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE NOV. 15, 1919,
COMPARED WITH NOV. 15, 1918, AND OCT. 15, 1919.

Article.	Unit.	Average retail price.			Per cent of increase (+) or decrease (—) Nov. 15, 1919, compared with—	
		Nov. 15, 1918.	Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15, 1918.	Oct. 15, 1919.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Strloin steak.....	Pound....	40.5	39.8	39.3	— 3	— 1
Round steak.....	do.....	38.5	36.9	36.2	— 6	— 2
Rib roast.....	do.....	32.0	30.6	30.2	— 6	— 1
Chuck roast.....	do.....	27.5	24.5	24.2	—12	— 1
Plate beef.....	do.....	21.2	17.6	17.3	—18	— 2
Pork chops.....	do.....	43.3	44.3	42.1	— 3	— 5
Bacon.....	do.....	58.3	52.8	51.0	—13	— 3
Ham.....	do.....	52.4	52.4	50.5	— 4	— 4
Lamb.....	do.....	35.1	33.9	33.4	— 5	— 1
Hens.....	do.....	39.3	40.2	39.2	(1)	— 2
Salmon, canned.....	do.....	31.3	34.8	35.7	+14	+ 3
Milk, fresh.....	Quart.....	15.4	16.0	16.4	+ 6	+ 3
Milk, evaporated (unsweetened).....	15-16 oz. can.....	.....	16.6	16.8	.....	+ 1
Butter.....	Pound....	66.8	71.1	75.4	+13	+ 6
Oleomargarine.....	do.....	.....	42.6	43.0	.....	+ 1
Nut margarine.....	do.....	.....	35.8	35.8	.....	(2)
Cheese.....	do.....	40.6	42.4	43.0	+ 6	+ 1
Lard.....	do.....	34.2	36.1	36.4	+ 6	+ 1
Crisco.....	do.....	.....	37.5	37.8	.....	+ 1
Eggs, strictly fresh.....	Dozen....	74.1	72.0	81.0	+ 9	+13
Eggs, storage.....	do.....	54.1	59.2	61.8	+14	+ 4
Bread.....	Pound ³	9.8	10.1	10.2	+ 4	+ 1
Flour.....	Pound....	6.7	7.3	7.4	+10	+ 1
Corn meal.....	do.....	6.5	6.6	6.6	+ 2	(2)
Rolled oats.....	do.....	.....	9.2	9.2	.....	(2)
Corn flakes.....	8-oz. pkg.....	.....	14.1	14.1	.....	(2)
Cream of Wheat.....	28-oz. pkg.....	.....	25.2	25.2	.....	(2)
Macaroni.....	Pound....	.....	19.5	19.7	.....	+ 1
Rice.....	do.....	14.0	17.3	17.6	+26	+ 2
Beans, navy.....	do.....	16.1	12.5	12.3	—24	— 2
Potatoes.....	do.....	3.3	3.8	3.9	+18	+ 3
Onions.....	do.....	4.0	6.3	6.9	+73	+10
Cabbage.....	do.....	.....	4.5	4.5	.....	(2)
Beans, baked.....	No. 2 can.....	.....	17.1	17.0	.....	— 1
Corn, canned.....	do.....	.....	19.1	18.9	.....	— 1
Peas, canned.....	do.....	.....	19.1	19.1	.....	(2)
Tomatoes, canned.....	do.....	.....	16.1	16.1	.....	(2)
Sugar, granulated.....	Pound....	10.8	11.4	12.5	+16	+10
Tea.....	do.....	67.9	71.0	71.2	+ 5	(4)
Coffee.....	do.....	30.8	47.6	47.8	+55	(4)
Prunes.....	do.....	18.4	29.0	30.2	+64	+ 4
Raisins.....	do.....	15.8	20.9	22.7	+44	+ 9
Bananas.....	Dozen....	.....	39.3	39.9	.....	+ 2
Oranges.....	do.....	.....	55.3	54.2	.....	— 2
22 weighted articles combined.....	.....	.....	.....	.....	+ 5	+ 2

¹ Decrease of less than five-tenths of 1 per cent.

² No change in price.

³ Baked weight.

⁴ Increase of less than five-tenths of 1 per cent.

For the 6-year period—November, 1913, to November, 1919—the increase in the prices of the 22 articles of food combined was 84 per cent. Articles which increased more than 100 per cent were: Rice, 102 per cent; bread, 104 per cent; potatoes, 105 per cent; corn meal, 113 per cent; flour, 124 per cent; lard, 129 per cent; and sugar, 131 per cent.

AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE NOV. 15 OF EACH SPECIFIED YEAR COMPARED WITH NOV. 15, 1913.

Article.	Unit.	Average retail price Nov. 15—							Per cent of increase (+) or decrease (—) Nov. 15 of each specified year compared with Nov. 15, 1913.					
		1913	1914	1915	1916	1917	1918	1919	1914	1915	1916	1917	1918	1919
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.						
Sirloin steak.....	Pound.	25.4	25.4	25.7	27.0	31.7	40.5	39.3	(1)	+ 1	+ 6	+ 25	+ 59	+ 55
Round steak.....	do.	22.8	23.5	22.8	24.3	29.6	38.5	36.2	+ 3	(1)	+ 7	+ 30	+ 69	+ 59
Rib roast.....	do.	19.7	20.4	19.9	21.0	25.0	32.0	30.2	+ 4	+ 1	+ 7	+ 27	+ 62	+ 53
Chuck roast.....	do.	16.3	16.7	16.2	17.0	21.2	27.5	24.2	+ 2	— 1	+ 4	+ 30	+ 69	+ 48
Plate beef.....	do.	12.4	12.7	12.0	12.0	16.3	21.2	17.3	+ 2	— 3	+ 3	+ 31	+ 71	+ 40
Pork chops.....	do.	21.6	21.8	20.9	23.4	34.5	43.3	42.1	+ 1	— 3	+ 8	+ 60	+ 100	+ 95
Bacon.....	do.	27.3	28.1	27.3	29.8	48.2	58.3	51.0	+ 3	(1)	+ 9	+ 77	+ 114	+ 87
Ham.....	do.	27.0	27.3	26.8	33.2	42.6	62.4	60.5	+ 1	— 1	+ 23	+ 58	+ 94	+ 87
Lamb.....	do.	18.5	19.2	19.8	22.2	30.1	35.1	33.4	+ 4	+ 7	+ 20	+ 63	+ 90	+ 81
Hens.....	do.	20.5	20.5	20.3	23.8	29.5	39.3	39.2	(1)	— 1	+ 16	+ 44	+ 92	+ 91
Salmon, canned.....	do.			19.8	20.8	28.7	31.3	35.7						
Milk, fresh.....	Quart.	9.1	9.0	8.9	9.6	12.8	15.4	16.4	— 1	— 2	+ 6	+ 41	+ 69	+ 80
Milk, evaporated (unsweetened).	15 16 oz. can.							16.8						
Butter.....	Pound.	38.6	39.4	36.6	43.7	52.8	66.8	75.4	+ 2	— 5	+ 13	+ 37	+ 7	+ 95
Oleomargarine.....	do.							43.0						
Nut margarine.....	do.							35.8						
Cheese.....	do.	22.5	23.0	23.2	29.2	34.6	40.6	43.0	+ 2	+ 3	+ 30	+ 54	+ 80	+ 91
Lard.....	do.	15.9	15.6	14.5	25.6	32.6	34.2	36.4	— 2	— 8	+ 61	+ 105	+ 115	+ 129
Crisco.....	do.							37.4						
Eggs, strictly fresh....	Dozen.	49.5	45.0	45.8	51.4	58.1	74.1	81.0	— 9	— 8	+ 4	+ 17	+ 50	+ 64
Eggs, storage.....	do.						54.1	61.8						
Bread.....	Pound ²	5.0	6.4	7.0	8.4	9.9	9.8	10.2	+ 23	+ 40	+ 68	+ 98	+ 96	+ 104
Flour.....	Pound.	3.3	3.7	3.7	5.7	6.8	6.7	7.4	+ 12	+ 12	+ 73	+ 106	+ 103	+ 124
Corn meal.....	do.	3.1	3.3	3.2	3.8	7.1	6.5	6.6	+ 7	+ 3	+ 23	+ 129	+ 110	+ 113
Rolled oats.....	do.							9.2						
Corn flakes.....	8-oz. pkg							14.1						
Cream of Wheat.....	28-oz. pkg							25.2						
Macaroni.....	Pound.							19.7						
Rice.....	do.	8.7	8.8	9.0	9.1	11.4	14.0	17.6	+ 1	+ 3	+ 5	+ 31	+ 61	+ 102
Beans, navy.....	do.			8.5	13.6	18.9	16.1	12.3						
Potatoes.....	do.	1.9	1.5	1.7	3.5	3.2	3.3	3.9	— 21	— 11	+ 84	+ 68	+ 74	+ 105
Onions.....	do.			3.3	5.1	5.8	4.0	6.9						
Cabbage.....	do.							4.5						
Beans, baked.....	No. 2 can							17.0						
Corn, canned.....	do.							18.9						
Peas, canned.....	do.							19.1						
Tomatoes, canned.....	do.							16.1						
Sugar, granulated.....	Pound.	5.4	6.2	6.5	8.6	9.5	10.8	12.5	+ 15	+ 20	+ 59	+ 76	+ 100	+ 131
Tea.....	do.	54.5	54.7	54.6	54.6	61.7	67.9	71.2	(3)	(3)	(3)	+ 13	+ 25	+ 31
Coffee.....	do.	29.8	29.6	29.9	29.9	30.2	30.8	47.8	— 1	(3)	(3)	+ 1	+ 3	+ 60
Prunes.....	do.			13.3	13.8	16.6	18.4	30.2						
Raisins.....	do.			12.5	13.7	14.8	15.8	22.7						
Bananas.....	Dozen.							39.9						
Oranges.....	do.							54.2						
22 weighted articles combined	Pound.								+ 1	(4)	+ 21	+ 48	+ 76	+ 84

¹ No change in price.

² Baked weight.

³ Increase of less than five-tenths of 1 per cent.

⁴ Decrease of less than five-tenths of 1 per cent.

RELATIVE RETAIL PRICES OF FOOD IN THE UNITED STATES ON OCT. 15 AND NOV. 15, 1919, AND NOV. 15, 1913, 1914, 1915, 1916, 1917, AND 1918.

[The relative price is the per cent that the average price on the 15th of each month is of the average price for the year 1913.]

Article.	Unit.	1919		Nov. 15—					
		Oct. 15.	Nov. 15.	1913	1914	1915	1916	1917	1918
Sirloin steak.....	Pound..	157	155	100	100	101	106	124	159
Round steak.....	do.....	165	162	102	105	102	108	133	173
Rib roast.....	do.....	155	153	100	103	101	106	127	162
Chuck roast.....	do.....	153	151	102	104	99	107	132	172
Plate beef.....	do.....	145	143	102	105	98	106	134	175
Pork chops.....	do.....	211	200	102	104	99	111	165	206
Bacon.....	do.....	196	189	101	104	101	111	179	216
Ham.....	do.....	195	188	100	102	100	114	159	195
Hens.....	do.....	189	184	97	97	95	112	138	185
Milk.....	Quart..	180	184	102	101	100	109	144	173
Butter.....	Pound..	186	197	101	103	95	114	138	174
Cheese.....	do.....	192	195	102	104	105	132	156	184
Lard.....	do.....	228	230	101	99	92	135	207	216
Eggs, strictly fresh.....	Dozen..	209	235	144	131	133	149	168	215
Bread.....	Pound ¹ .	177	179	100	114	122	150	176	172
Flour.....	Pound..	221	224	99	112	113	174	208	203
Corn meal.....	do.....	220	220	104	109	107	126	235	217
Rice.....	do.....	199	202	100	101	104	105	131	161
Potatoes.....	do.....	224	229	107	83	97	198	183	194
Sugar, granulated.....	do.....	207	227	99	113	119	157	174	196
Tea.....	do.....	131	131	100	101	100	100	114	125
Coffee.....	do.....	159	160	100	99	100	100	102	103
22 weighted articles combined.....	do.....	188	192	105	105	104	126	155	183

¹ Baked weight.

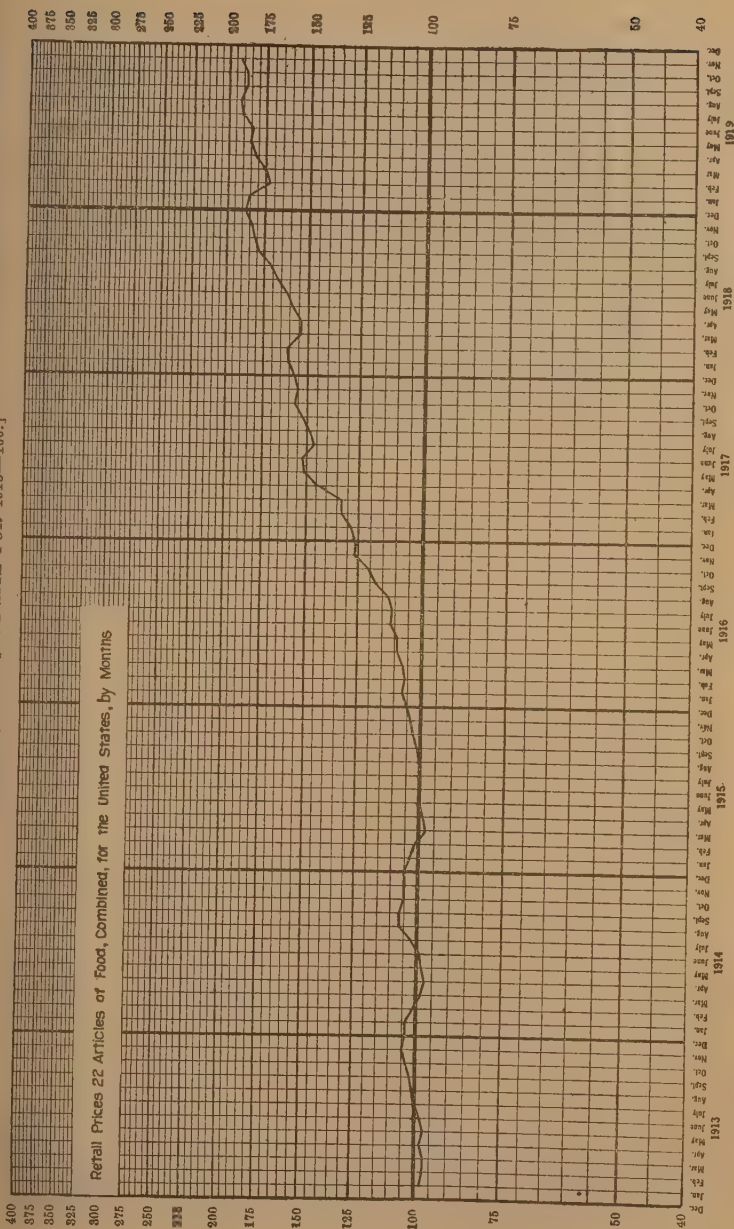
Trend in Retail Prices of 22 Food Articles, Combined, by Months.

THE chart on the opposite page shows the curve in the retail cost of 22 of the most essential foods¹ for the United States for each month from January, 1913, to and including November, 1919. The logarithmic chart is used because the percentages of increase or decrease are more clearly seen than on an arithmetic chart.² The chart is the result of an aggregate of actual prices so weighted that each commodity may have an influence equal only to its relative importance. The price of each commodity to be included in the aggregate for each month has been multiplied by a number representing the importance of that commodity in the average family consumption. These weighted products of the several commodities to be combined are added, and computed as percentages of the aggregate, similarly computed, for the year 1913. The resulting index numbers show the trend in the retail cost of the several articles combined.

¹ See note on page 69.

² For a discussion of the logarithmic chart, see article on Comparison of arithmetic and ratio charts, by Lucian W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, The "ratio" chart, by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pp.

TREND IN RETAIL PRICES OF 22 FOOD ARTICLES, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO NOVEMBER, 1919. [AVERAGE FOR 1913=100.]



Since September, 1915, there has been a steady increase in the cost of these 22 articles of food. In December, 1918, the cost of these foods was 87 per cent above the 1913 average. In January, 1919, there was a slight decline. February prices declined 7 per cent, but from that date until June the prices advanced. In June there was a decline of less than five-tenths of 1 per cent. July prices increased 3 per cent. August prices showed a further increase of 1 per cent, which month became the high-water mark. In September, there was a decrease of 2 per cent; in October, a further decrease of two-tenths of 1 per cent; but in November, there was an increase of 2 per cent which brought the cost up to the previous high-water mark in August. Using the average cost in the year 1913 as the base, or 100, the relative figure representing the November cost was 192, or an increase of 92 per cent over the year 1913.

Retail Prices of Food in 50 Cities on Specified Dates.

Effort is made by the Bureau to secure quotations on similar grades of commodities in all cities. There are, however, some local customs which must be taken into consideration when any comparison is made of the prices in the different cities. The method of cutting sirloin steak in Boston, Mass.: Manchester, N. H.; Philadelphia, Pa.; Providence, R. I.; and Portland, Me., differs from that in other cities. The cut known as "sirloin" in these five cities would be in other cities known as "porterhouse." There is in these cities, owing to the methods of dividing the round from the loin, no cut that corresponds to that of "sirloin" in other cities. There is also a greater amount of trimming demanded by the retail trade in these cities than in others. This is particularly true of Providence, R. I. These, together with the fact that almost all the beef sold in these cities is of better grade, are the main reasons why the retail prices of beef in these cities are higher than in others.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR NOV. 15

[The prices shown in the tables following are computed from imports sent monthly to the Bureau by retail

Article.	Unit.	Atlanta, Ga.						Baltimore, Md.					
		Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	24.2	24.1	30.9	38.7	37.8	38.3	22.8	22.4	31.1	44.7	39.8	39.4
Round steak.....	Lb.	21.3	22.2	28.0	35.6	34.4	35.3	21.3	20.8	30.4	43.6	38.7	37.1
Rib roast.....	Lb.	19.0	18.9	23.8	30.0	27.9	28.1	17.5	18.4	25.3	34.9	31.5	32.1
Chuck roast.....	Lb.	15.8	16.1	20.2	25.9	21.9	22.8	15.0	15.4	22.0	30.3	25.7	24.4
Plate beef.....	Lb.	9.9	9.7	15.0	20.0	16.2	17.4	12.2	13.4	17.5	23.4	19.3	17.9
Pork chops.....	Lb.	25.0	22.7	36.3	42.5	41.7	41.5	18.2	19.8	33.3	46.2	43.2	39.8
Bacon.....	Lb.	31.1	30.0	50.1	61.8	57.2	56.7	21.5	24.0	45.1	59.1	49.4	46.2
Ham.....	Lb.	30.8	30.0	43.2	53.8	53.8	54.0	27.5	31.0	46.8	59.3	56.8	54.4
Lamb.....	Lb.	20.2	19.3	32.1	38.1	36.1	36.5	18.0	19.0	31.3	39.2	34.5	32.5
Hens.....	Lb.	21.0	20.4	31.7	38.6	40.0	38.4	20.2	20.0	29.6	40.2	43.6	41.2
Salmon (canned).....	Lb.	.....	.....	23.5	27.0	28.2	30.6	.....	.....	25.5	28.0	32.5	33.5
Milk, fresh.....	Qt.	10.6	10.6	17.5	20.0	22.5	25.0	8.7	8.7	12.0	17.0	16.0	16.0
Milk, evaporated (unsweetened).....	(2)	.....	.....	.....	.....	17.4	17.9	.....	.....	.....	.....	16.1	16.4
Butter.....	Lb.	39.8	39.4	55.1	65.7	74.1	76.5	38.4	40.3	53.9	69.6	72.1	78.1
Oleomargarine.....	Lb.	.....	.....	.....	.....	44.3	44.4	.....	.....	.....	.....	40.8	40.4
Nut margarine.....	Lb.	.....	.....	.....	.....	38.7	40.4	.....	.....	.....	.....	36.2	36.1
Cheese.....	Lb.	25.0	25.0	34.7	42.2	39.9	42.2	23.3	23.3	35.8	41.7	42.8	42.8
Lard.....	Lb.	15.3	15.5	32.8	35.1	35.1	36.5	15.0	14.8	32.7	34.5	34.1	35.5
Crisco.....	Lb.	.....	.....	.....	.....	35.1	35.9	.....	.....	.....	.....	34.4	35.3
Eggs, strictly fresh.....	Doz.	40.0	36.9	50.1	67.6	64.7	71.8	45.9	42.0	58.0	73.1	65.5	76.3
Eggs, storage.....	Doz.	.....	.....	43.5	52.8	60.0	60.5	33.1	29.9	44.0	57.9	57.7	61.1
Bread.....	Lb. ³	5.6	6.0	10.1	10.0	10.0	10.0	5.5	5.7	9.2	9.7	9.6	9.6
Flour.....	Lb.	3.5	3.7	7.1	6.8	7.2	7.3	3.1	3.7	6.8	6.9	7.5	7.7
Corn meal.....	Lb.	2.6	2.8	5.4	5.7	5.7	5.6	2.6	2.7	6.4	6.2	5.8	5.6
Rollod oats.....	Lb.	.....	.....	.....	.....	10.5	10.6	.....	.....	.....	.....	8.2	7.8
Corn flakes.....	(4)	.....	.....	.....	.....	14.0	14.0	.....	.....	.....	.....	13.0	13.1
Cream of Wheat.....	(5)	.....	.....	.....	.....	24.7	24.4	.....	.....	.....	.....	23.4	23.3
Macaroni.....	Lb.	.....	.....	.....	.....	20.3	20.3	.....	.....	.....	.....	18.6	18.2
Rice.....	Lb.	8.6	8.6	11.1	14.4	17.0	17.3	9.0	9.0	11.4	14.1	18.3	18.0
Beans, navy.....	Lb.	.....	.....	18.8	17.9	15.0	14.5	.....	.....	19.0	17.8	12.2	11.9
Potatoes.....	Lb.	2.3	1.8	4.0	4.4	5.0	5.0	1.8	1.5	3.0	3.8	3.8	3.7
Onions.....	Lb.	.....	.....	5.9	5.7	8.4	8.2	.....	.....	4.9	4.1	5.8	6.4
Cabbage.....	Lb.	.....	.....	.....	.....	6.2	6.2	.....	.....	.....	.....	3.8	4.0
Beans, baked.....	(9)	.....	.....	.....	.....	16.1	15.9	.....	.....	.....	.....	16.1	15.8
Corn, canned.....	(9)	.....	.....	.....	.....	20.3	20.4	.....	.....	.....	.....	19.1	18.1
Peas, canned.....	(9)	.....	.....	.....	.....	20.4	20.4	.....	.....	.....	.....	18.7	18.4
Tomatoes, canned.....	(9)	.....	.....	.....	.....	14.2	14.5	.....	.....	.....	.....	14.6	15.2
Sugar, granulated.....	Lb.	5.7	6.7	11.0	10.9	11.8	13.5	4.8	5.7	9.6	10.4	10.9	11.0
Tea.....	Lb.	60.0	60.0	78.4	88.6	87.1	91.3	56.0	56.0	64.9	73.3	73.0	71.1
Coffee.....	Lb.	32.0	33.0	29.2	30.7	49.8	49.8	24.4	24.4	28.1	29.8	45.0	46.1
Prunes.....	Lb.	.....	.....	18.0	19.2	25.3	24.4	.....	.....	17.3	18.5	29.5	30.0
Raisins.....	Lb.	.....	.....	16.1	18.1	21.0	21.5	.....	.....	14.6	15.9	21.9	22.6
Bananas.....	Doz.	.....	.....	.....	.....	31.8	37.7	.....	.....	.....	.....	33.5	31.8
Oranges.....	Doz.	.....	.....	.....	.....	54.1	40.6	.....	.....	.....	.....	59.1	59.1

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

² 15-16 ounce can.

1913, 1914, 1917, 1918, 1919, AND OCT. 15, 1919, FOR 19 CITIES.

dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month.]

Birmingham, Ala.						Boston, Mass.						Buffalo, N. Y.					
Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
28.0	28.5	34.0	40.5	39.1	39.1	34.0	38.8	41.8	45.0	40.7	40.2	22.2	23.0	31.1	39.0	37.3	35.9
23.0	24.0	31.0	37.0	37.3	36.8	35.0	36.0	42.1	56.8	55.7	55.7	19.4	20.6	28.9	36.5	34.0	32.4
19.4	20.9	25.0	33.5	31.7	31.3	23.9	24.6	30.7	38.5	39.9	41.3	16.4	17.8	24.3	31.1	29.9	28.7
16.5	17.1	20.2	28.9	26.4	26.2	16.2	17.8	24.9	30.8	30.7	30.9	15.2	15.8	22.0	27.1	25.0	24.2
10.0	12.0	16.3	22.1	17.6	17.9							11.7	12.8	16.6	22.3	18.3	17.3
23.0	21.3	34.8	42.0	43.0	42.5	22.4	24.8	35.3	46.9	49.9	46.5	19.8	21.0	34.9	42.1	42.9	42.7
34.0	35.0	53.0	62.5	58.3	57.6	24.6	27.2	45.8	54.5	48.9	47.0	21.2	23.0	46.0	53.0	43.3	41.2
32.0	31.0	44.5	52.0	55.0	53.6	31.0	33.0	44.3	56.7	56.9	54.8	26.3	28.0	42.4	52.9	51.5	51.1
21.9	22.4	32.5	38.3	37.5	39.2	20.5	22.0	33.6	37.7	37.4	37.0	15.6	17.2	27.6	30.8	26.7	25.6
19.3	17.5	28.6	38.6	38.2	37.1	24.3	24.0	32.6	44.6	45.5	45.5	20.0	19.6	29.7	38.7	39.1	37.5
		27.8	31.4	34.7	38.4			30.0	32.0	33.3	34.3			28.0	28.7	32.3	33.3
10.0	10.4	15.2	20.0	25.0	25.0	8.9	8.9	14.0	16.5	16.4	17.0	8.0	8.0	14.0	16.0	16.0	16.0
41.7	39.2	56.1	69.1	75.0	79.0	38.2	37.5	51.7	63.8	68.3	71.1	38.1	39.0	50.6	65.4	70.0	74.7
				44.6	45.4					42.5	42.4					41.6	42.5
				40.1	39.2					35.8	35.0					34.0	34.2
23.0	23.1	34.1	45.3	40.0	41.5	23.4	23.1	32.6	35.9	42.2	42.2	21.5	21.5	33.4	38.3	40.9	40.9
15.1	15.5	32.9	33.5	36.0	36.2	15.8	15.5	32.9	34.4	37.1	37.3	14.2	14.3	31.5	32.7	33.4	34.7
39.0	36.0	48.8	64.8	59.3	67.3	60.6	64.8	73.7	90.2	92.9	102.1	48.5	45.0	59.5	73.9	72.7	79.0
32.5	30.0	45.0	55.5	55.0	60.0	35.2	34.2	47.7	55.1		64.7	30.6	28.7	42.8	52.6	52.6	59.0
5.4	5.5	10.6	11.7	9.6	9.6	6.0	6.1	9.1	9.1	0.6	9.7	5.6	5.2	9.8	10.0	10.0	10.0
3.6	3.7	7.1	6.9	7.5	7.6	3.6	4.1	7.5	6.7	7.8	7.9	3.0	3.5	6.4	6.3	6.9	7.0
2.5	2.5	5.0	5.3	5.3	5.3	3.5	3.8	7.6	7.1	7.8	7.3	2.6	2.9	7.4	6.0	6.2	6.3
				11.2	11.0					8.1	7.9					7.6	7.6
				14.7	14.6					14.0	14.0					13.1	12.9
				25.7	25.9					24.7	24.7					24.0	24.1
				20.6	21.0					21.6	21.9					20.0	19.4
8.2	7.9	12.4	14.2	17.5	17.8	9.4	9.4	11.8	13.9	17.1	17.5	9.3	9.3	11.3	13.7	17.4	17.7
		19.4	17.0	15.0	14.0			18.4	16.9	11.7	11.5			19.6	15.1	11.6	11.5
2.2	1.8	3.6	4.1	4.9	5.0	1.7	1.4	3.5	3.4	3.2	3.5	1.8	1.0	3.2	2.8	3.0	3.1
		5.5	4.4	7.6	8.4			5.8	3.4	6.1	6.4			5.6	3.8	6.3	6.4
				5.5	5.4					3.8	4.5					4.9	4.8
				18.4	17.9					17.6	17.5					13.9	13.9
				19.2	18.9					21.3	21.0					18.4	18.2
				22.0	21.7					20.6	20.1					17.5	17.7
				14.8	14.4					17.0	15.8					16.3	16.4
5.4	6.4	10.4	10.8	11.6	20.3	5.4	6.0	10.2	10.7	10.9	10.9	5.3	6.1	9.9	10.6	10.9	11.0
61.3	61.3	73.9	82.9	89.1	87.1	58.6	58.6	64.8	65.3	66.3	66.6	45.0	45.0	53.9	63.0	66.2	66.0
28.8	28.8	33.3	32.6	49.5	49.6	33.0	32.1	34.4	34.8	53.0	52.7	29.3	29.3	29.5	30.0	46.2	46.6
		15.0	16.4	33.3	30.0			16.8	19.3	31.8	29.0			16.6	19.2	28.7	28.0
		15.3	16.5	20.4	20.9			15.0	15.4	20.8	22.9			14.0	14.5	18.8	20.0
				40.0	41.6					44.6	46.9					42.3	42.2
				50.3	45.5					62.1	61.7					60.2	58.5

³ Baked weight.
⁴ 8-ounce package.

⁵ 28-ounce package.
⁶ No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR NOV. 15,

Article.	Unit.	Chicago, Ill.						Cleveland, Ohio.					
		Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	21.7	26.3	29.7	37.3	36.6	37.0	25.0	24.7	29.0	36.6	37.6	37.1
Round steak.....	Lb.	21.1	23.4	26.5	34.1	32.5	32.5	22.4	21.7	27.0	33.9	34.5	33.1
Rib roast.....	Lb.	19.5	21.1	24.5	31.3	28.9	29.6	18.6	18.9	22.6	28.0	28.3	27.8
Chuck roast.....	Lb.	15.9	17.7	20.6	27.6	24.3	24.3	17.0	17.1	20.6	26.2	21.3	21.0
Plate beef.....	Lb.	12.0	12.7	16.2	20.6	17.0	17.0	12.6	12.4	15.6	19.8	17.4	16.7
Pork chops.....	Lb.	19.3	19.7	31.2	37.7	41.0	36.8	21.6	22.0	33.1	41.0	44.9	41.7
Bacon.....	Lb.	32.1	31.9	49.7	59.5	54.6	54.2	28.1	29.6	46.7	56.4	49.8	48.3
Ham.....	Lb.	32.3	33.1	44.5	52.5	54.0	52.3	35.7	33.5	44.1	54.5	56.2	54.2
Lamb.....	Lb.	19.3	20.1	28.2	33.7	33.1	32.9	18.1	19.7	28.8	32.4	31.6	31.9
Hens.....	Lb.	17.1	18.1	25.8	31.5	33.1	33.3	19.9	19.4	29.4	37.4	39.2	37.3
Salmon (canned).....	Lb.			30.1	31.7	34.9	36.2			29.1	30.0	35.0	36.1
Milk, fresh.....	Qt.	8.0	8.0	11.9	14.0	15.0	15.0	8.0	8.0	12.0	15.0	15.7	16.0
Milk, evaporated (unsweetened).....	(¹)					15.3	15.5					16.8	17.1
Butter.....	Lb.	36.5	36.4	49.2	65.3	67.8	73.6	40.7	40.9	53.0	68.8	73.8	79.8
Oleomargarine.....	Lb.					40.4	41.7					43.7	45.5
Nut margarine.....	Lb.					33.4	33.5					35.3	35.5
Cheese.....	Lb.	25.3	25.0	37.4	40.4	44.4	44.6	21.0	21.0	31.8	39.0	42.1	41.9
Lard.....	Lb.	15.0	15.1	30.9	32.7	34.6	34.4	16.3	16.1	33.2	34.2	36.2	36.1
Crisco.....	Lb.					35.5	36.3					38.1	37.6
Eggs, strictly fresh.....	Doz.	39.8	35.8	49.6	67.7	65.6	74.2	50.0	47.7	60.5	75.8	75.8	84.2
Eggs, storage.....	Doz.	30.3	28.6	41.1	51.3	50.1	58.2	35.7	32.3	43.1	53.4	61.5	63.1
Bread.....	Lb. ²	6.1	6.2	10.1	10.2	10.7	10.6	5.6	5.7	9.9	10.0	9.7	9.3
Flour.....	Lb.	2.9	3.4	6.4	6.3	7.1	7.3	3.2	3.7	6.9	6.7	7.4	7.6
Corn meal.....	Lb.	2.9	2.9	6.9	6.5	6.7	6.7	3.0	3.1	7.6	6.2	6.5	6.6
Rollod oats.....	Lb.					7.0	7.1					9.1	9.6
Corn flakes.....	(³)					12.8	13.0					14.2	14.5
Cream of Wheat.....	(⁴)					21.1	21.1					21.4	21.6
Macaroni.....	Lb.					17.8	18.0					18.6	19.2
Rice.....	Lb.	9.0	9.3	11.4	13.7	16.6	16.7	9.0	9.5	11.8	11.5	18.0	18.1
Beans, navy.....	Lb.			19.0	15.7	11.8	12.0			19.4	11.6	11.9	11.7
Potatoes.....	Lb.	1.7	1.2	2.7	2.6	3.4	3.8	2.0	1.2	3.3	3.1	4.1	4.0
Onions.....	Lb.			4.5	3.4	5.9	6.8			5.5	3.2	5.6	6.8
Cabbage.....	Lb.					4.5	4.6					4.7	4.5
Beans, baked.....	(⁵)					16.6	16.2					16.3	15.7
Corn, canned.....	(⁶)					17.6	17.4					18.9	19.3
Peas, canned.....	(⁶)					17.5	17.5					18.6	18.7
Tomatoes, canned.....	(⁶)					15.5	15.8					16.2	16.0
Sugar, granulated.....	Lb.	5.1	5.7	8.5	10.6	12.4	13.2	5.4	6.3	9.7	10.8	11.0	12.7
Tea.....	Lb.	55.0	55.0	58.8	60.4	63.7	64.7	50.0	50.0	55.6	66.7	73.8	72.8
Coffee.....	Lb.	30.7	30.0	28.7	28.6	44.4	44.8	26.5	26.5	29.5	30.5	49.3	50.2
Prunes.....	Lb.			16.3	17.9	28.9	28.9			17.9	18.6	29.4	28.3
Raisins.....	Lb.			15.0	15.7	20.2	23.3			14.3	15.6	22.1	22.8
Bananas.....	Doz.					35.6	38.7					46.0	46.4
Oranges.....	Doz.					52.8	52.3					57.8	57.7

¹ 15-16 ounce can.² Baked weight.³ 8-ounce package.

1913, 1914, 1917, 1918, 1919, AND OCT. 15, 1919, FOR 19 CITIES—Continued.

Denver, Colo.						Detroit, Mich.						Los Angeles, Calif.					
Nov. 15—				Oct. 15, 1918.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
22.9	22.1	28.2	35.7	33.3	33.6	25.6	23.3	29.4	35.3	37.8	36.7	23.9	23.7	26.5	32.9	31.1	31.7
20.3	21.1	26.2	31.9	30.1	29.9	20.6	20.4	26.8	32.5	32.5	32.1	21.4	21.2	24.0	31.4	28.1	28.7
16.7	17.9	22.0	27.0	26.4	25.8	20.0	18.7	23.5	28.0	29.5	29.6	18.9	19.7	22.2	26.2	26.2	26.4
15.3	15.3	19.7	24.0	21.0	21.2	15.2	15.6	19.3	24.0	22.7	22.2	16.0	15.9	18.9	24.6	19.7	19.6
9.9	10.7	13.8	17.3	14.1	14.2	11.4	11.9	15.4	19.0	16.6	16.0	13.4	13.4	15.7	20.0	15.6	16.0
20.4	21.0	34.6	39.9	45.3	42.6	19.4	20.4	32.6	39.8	45.1	41.8	26.0	26.6	36.8	46.4	44.7	46.8
28.0	30.6	50.6	59.3	54.8	53.7	22.3	25.0	45.8	55.8	49.2	46.7	33.5	34.5	52.7	65.7	58.5	56.8
29.2	31.7	46.8	57.1	57.2	55.0	27.0	29.0	42.0	55.6	56.6	53.7	35.0	36.3	52.2	61.9	59.1	59.0
15.2	17.1	29.8	30.4	27.8	28.3	15.1	16.4	28.6	33.1	34.4	33.3	18.6	19.3	29.7	33.4	29.7	30.8
18.5	18.8	27.8	32.3	36.7	35.4	19.2	18.3	29.3	35.5	39.3	36.8	26.3	26.3	32.6	44.5	46.0	46.8
8.4	8.4	26.9	29.2	35.6	36.1	12.8	9.0	29.3	31.3	34.6	35.8	10.0	10.0	29.8	36.1	43.1	45.8
35.0	39.0	48.5	64.5	16.4	12.7	16.6	9.0	12.0	15.0	16.0	16.0	10.0	10.0	12.0	14.0	14.0	16.0
42.2	41.5	35.6	35.3	35.6	35.3	37.1	38.9	50.5	67.0	71.5	76.7	39.7	42.6	48.5	67.1	73.4	74.1
26.1	26.1	35.1	39.3	44.9	44.9	22.3	22.7	34.2	41.0	42.0	43.1	19.5	20.0	34.2	40.8	44.7	44.0
16.0	15.8	34.4	34.7	37.9	38.4	16.4	15.8	33.3	34.0	35.5	36.5	18.1	17.3	30.9	34.6	34.9	34.6
45.0	38.0	52.8	67.9	35.5	37.7	75.8	41.0	37.0	58.2	76.1	80.8	53.8	52.9	62.5	81.1	77.6	83.5
33.0	30.0	44.4	54.0	55.0	62.8	32.2	29.3	41.1	51.0	57.4	59.9	37.0	35.5	44.9	56.8	63.0	63.8
5.5	5.6	9.9	12.0	11.2	11.2	5.6	5.9	9.2	9.5	10.2	9.9	6.0	6.5	8.9	9.3	9.4	9.7
2.5	3.0	5.7	6.0	6.1	6.2	3.1	3.5	6.6	6.5	7.2	7.4	3.5	4.0	6.3	7.2	7.2	7.3
2.6	2.7	6.1	5.9	6.1	5.9	2.9	3.2	8.3	6.6	6.9	7.2	3.4	3.8	7.6	7.4	7.6	7.5
14.7	14.6	19.5	19.3	19.5	19.3	17.1	17.8	8.4	8.4	11.8	14.1	18.5	7.7	8.0	10.2	14.0	13.2
25.0	24.8	17.1	17.8	17.1	17.8	8.4	8.4	11.8	14.1	18.1	18.5	7.7	8.0	10.2	14.0	16.3	16.5
8.6	8.6	11.6	15.0	13.2	13.2	19.1	14.6	11.8	11.3	11.3	11.3	17.3	15.9	11.0	10.6	11.0	10.6
1.6	1.2	2.9	2.8	3.4	4.1	1.7	1.1	2.7	2.6	3.3	3.5	1.9	1.7	2.0	3.2	3.7	4.1
17.6	17.7	17.6	17.7	17.6	17.7	17.6	17.7	17.6	17.7	17.6	17.7	17.6	17.7	17.6	17.7	17.6	17.7
19.2	19.5	19.2	19.5	19.2	19.5	19.2	19.5	19.2	19.5	19.2	19.5	19.2	19.5	19.2	19.5	19.2	19.5
5.1	5.8	8.9	11.4	12.4	12.6	5.2	6.1	8.8	10.6	11.1	13.0	5.3	6.3	8.4	10.6	11.7	12.4
52.8	52.8	57.7	64.1	70.5	70.4	43.3	43.3	57.6	61.3	63.3	64.0	54.5	54.5	57.1	67.8	68.8	69.1
29.4	29.4	30.0	30.9	49.2	49.8	29.3	30.0	29.9	30.3	49.2	49.0	36.3	36.3	30.3	30.4	46.5	45.0
13.2	19.0	28.3	29.6	21.0	23.6	13.6	15.8	31.4	31.0	31.0	31.0	15.1	18.4	29.0	27.0	29.0	27.0
14.3	15.1	21.0	23.6	43.2	43.5	50.1	53.6	21.1	23.5	21.1	23.5	13.3	15.8	19.6	21.0	19.6	21.0
50.1	53.6	50.1	53.6	50.1	53.6	50.1	53.6	50.1	53.6	50.1	53.6	50.1	53.6	50.1	53.6	50.1	53.6

* 28-ounce package.

* No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR NOV. 15,

Article.	Unit.	Milwaukee, Wis.						New Orleans, La.					
		Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
Sirloin steak.....	Lb.	Cts. 23.6	Cts. 23.3	Cts. 28.0	Cts. 34.0	Cts. 36.0	Cts. 34.6	Cts. 21.5	Cts. 22.2	Cts. 27.3	Cts. 32.5	Cts. 31.7	Cts. 31.3
Round steak.....	Lb.	21.6	21.7	26.9	32.9	34.0	32.7	19.0	20.1	23.8	29.6	29.2	28.1
Rib roast.....	Lb.	18.4	18.7	22.9	27.7	28.9	27.8	18.0	19.3	22.8	29.2	28.3	27.8
Chuck roast.....	Lb.	16.2	17.0	20.5	25.6	25.7	24.4	14.9	14.5	18.6	22.3	22.1	20.6
Plate beef.....	Lb.	12.1	12.8	15.2	19.6	18.1	17.0	11.9	12.1	15.1	19.2	18.2	17.9
Pork chops.....	Lb.	19.6	19.3	31.0	37.9	41.7	37.3	24.5	23.9	36.0	45.0	47.2	45.2
Bacon.....	Lb.	27.8	28.2	47.5	55.9	54.0	50.9	30.5	31.9	53.0	63.5	55.5	52.3
Ham.....	Lb.	28.2	27.7	43.0	51.7	52.7	50.0	26.0	27.0	45.0	51.0	49.5	46.3
Lamb.....	Lb.	19.0	19.6	29.8	33.5	34.0	32.3	20.5	20.9	29.5	37.5	38.5	37.3
Hens.....	Lb.	17.2	17.7	23.8	31.2	32.5	30.3	20.5	22.3	29.7	39.3	43.5	42.7
Salmon (canned).....	Lb.			27.8	29.6	37.4	36.9			31.9	34.0	36.6	36.7
Milk, fresh.....	Qt.	7.0	7.0	11.0	13.0	13.0	13.0	9.8	9.8	13.6	16.0	18.5	18.7
Milk, evaporated (unsweetened) (2).....						16.9	17.1					16.5	16.5
Butter.....	Lb.	36.6	37.7	49.8	66.5	71.8	76.3	38.1	39.5	51.2	66.6	71.5	76.1
Oleomargarine.....	Lb.					42.1	42.8					43.4	44.3
Nut margarine.....	Lb.					34.4	35.1					36.1	36.2
Cheese.....	Lb.	22.3	22.3	34.4	42.7	42.0	42.0	21.9	22.8	34.8	43.1	42.0	42.9
Lard.....	Lb.	16.0	16.3	32.4	34.9	36.3	36.7	15.0	14.6	31.4	34.8	35.9	36.4
Crisco.....	Lb.					37.6	36.8					39.5	39.1
Eggs, strictly fresh.....	Doz.	45.0	38.3	48.3	63.8	65.1	73.5	41.3	34.4	46.1	64.8	62.3	69.3
Eggs, storage.....	Doz.	33.0	29.0	41.4	49.8	55.8	58.6	30.0	28.8	39.7	51.6	57.2	61.0
Bread.....	Lb. ³	5.7	6.3	9.8	9.2	10.0	10.0	4.8	5.3	9.0	9.2	9.2	9.2
Flour.....	Lb.	3.1	3.7	6.4	6.5	7.4	7.5	3.7	3.9	7.8	7.3	7.5	7.5
Corn meal.....	Lb.	3.3	3.6	7.7	6.7	6.7	6.4	2.8	2.9	7.0	6.2	5.8	5.5
Rolled oats.....	Lb.					8.4	8.2					8.7	8.9
Corn flakes.....	(4)					14.2	14.2					14.1	14.4
Cream of Wheat.....	(5)					25.3	25.4					24.8	24.8
Macaroni.....	Lb.					19.0	18.4					14.4	11.3
Rice.....	Lb.	9.0	9.5	11.5	14.3	17.6	17.7	7.5	7.5	10.1	12.2	14.8	15.1
Beans, navy.....	Lb.			19.5	14.6	11.6	11.5			17.3	15.9	11.4	11.6
Potatoes.....	Lb.	1.7	1.2	2.8	2.6	3.4	3.6	2.2	2.1	4.2	4.2	5.0	4.9
Onions.....	Lb.			4.8	3.3	6.2	7.3			5.2	4.3	5.9	6.7
Cabbage.....	Lb.					2.8	3.4					5.0	4.5
Beans, baked.....	(9)					16.3	16.2					17.6	17.2
Corn, canned.....	(9)					18.2	17.8					17.6	17.8
Peas, canned.....	(6)					17.5	17.8					18.4	17.8
Tomatoes, canned.....	(6)					17.0	16.4					14.9	15.1
Sugar, granulated.....	Lb.	5.3	6.0	8.8	10.8	11.8	13.7	5.1	6.1	9.6	10.5	10.9	11.1
Tea.....	Lb.	50.0	50.0	58.6	65.9	68.2	69.1	62.1	62.1	61.3	63.4	67.1	68.6
Coffee.....	Lb.	27.5	27.5	27.0	26.6	47.1	47.5	25.7	25.0	27.4	27.2	42.5	42.5
Prunes.....	Lb.			15.8	15.6	29.9	28.6			17.0	18.5	33.3	31.3
Raisins.....	Lb.			14.7	15.1	20.8	22.8			15.5	16.6	19.2	22.5
Bananas.....	Doz.					40.0	39.3					25.0	25.0
Oranges.....	Doz.					57.9	58.6					65.0	41.0

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

² 15-16 ounce can.

1913, 1914, 1917, 1918, 1919, AND OCT. 15, 1919, FOR 19 CITIES—Continued.

New York, N. Y.						Philadelphia, Pa.						Pittsburgh, Pa.					
Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
25.9	26.6	32.6	43.0	42.6	42.5	30.5	31.1	37.4	53.4	50.4	49.3	27.3	29.0	34.5	45.6	45.2	45.2
25.4	26.5	33.5	44.8	44.5	44.4	25.7	26.6	34.4	46.5	46.8	45.0	24.0	24.0	31.8	42.2	40.7	40.8
21.3	21.7	27.9	38.3	37.2	37.6	21.5	22.3	28.3	37.6	38.8	38.0	21.7	22.4	26.5	35.3	34.2	34.8
16.0	16.7	21.8	30.3	27.6	27.6	18.0	18.5	23.7	32.6	30.5	29.3	17.3	18.0	23.1	30.8	28.3	28.2
14.5	15.7	20.9	27.0	24.4	24.7	12.0	12.2	16.9	22.6	19.4	17.5	12.8	13.5	16.8	22.5	18.2	18.2
22.6	23.3	33.9	45.5	45.7	46.7	22.5	22.7	35.6	44.9	46.2	43.1	22.5	23.0	35.0	43.3	44.8	44.6
25.0	26.6	45.9	55.3	47.9	48.0	26.9	27.8	46.9	58.3	53.1	51.4	30.4	30.9	49.4	61.3	55.8	54.9
27.9	30.0	46.0	39.5	57.0	56.3	30.4	31.8	48.2	58.1	58.6	56.7	29.8	32.5	45.6	58.8	59.8	57.7
15.1	16.7	26.5	31.2	29.0	29.3	18.8	19.7	31.0	36.9	39.4	39.2	20.3	21.2	34.2	37.9	38.5	39.1
21.1	21.4	29.5	40.8	40.5	39.9	23.1	23.2	32.2	44.1	44.1	44.1	23.8	24.2	33.8	44.1	44.6	43.6
9.0	9.0	14.0	17.0	16.0	17.7	8.0	8.0	26.3	29.4	31.4	32.5	9.2	9.3	29.9	31.9	36.3	36.7
39.9	41.0	51.6	68.5	72.4	77.9	44.3	44.7	56.7	71.6	77.2	81.9	40.4	40.6	52.8	69.5	74.5	78.5
-----	-----	-----	-----	41.7	42.3	-----	-----	-----	-----	44.5	45.7	-----	-----	-----	-----	42.2	43.4
-----	-----	-----	-----	34.5	34.5	-----	-----	-----	-----	38.3	38.0	-----	-----	-----	-----	35.5	35.8
20.2	20.6	33.8	36.7	42.3	42.9	25.0	25.5	35.7	40.0	44.9	45.9	24.5	25.0	35.1	42.0	43.2	43.5
16.2	15.9	33.1	34.3	35.7	36.3	15.5	15.0	33.0	33.9	35.2	35.7	15.7	15.4	33.1	34.3	36.3	36.6
-----	-----	-----	-----	36.1	36.9	-----	-----	-----	-----	34.8	35.2	-----	-----	-----	-----	37.3	37.4
56.1	49.3	64.7	80.2	80.0	88.1	50.8	47.5	59.3	77.6	75.5	82.9	46.3	39.5	55.3	75.2	70.2	78.6
37.3	32.4	44.6	56.1	60.5	62.5	34.7	32.2	43.4	57.8	61.2	62.8	33.4	30.7	45.3	55.1	59.3	60.9
6.0	6.3	9.8	9.1	10.0	10.0	4.8	4.8	8.8	9.5	9.4	9.4	5.4	5.5	10.1	9.8	10.3	10.3
3.2	3.6	7.7	7.9	7.5	7.7	3.2	3.7	7.2	6.7	7.4	7.4	3.2	3.7	7.0	6.7	7.5	7.6
3.5	3.6	8.3	7.6	7.3	7.6	2.9	3.0	7.2	6.7	6.3	6.5	3.0	3.2	8.7	7.3	7.6	7.3
-----	-----	-----	-----	7.9	7.9	-----	-----	-----	-----	8.3	8.3	-----	-----	-----	-----	9.4	9.5
-----	-----	-----	-----	12.0	12.1	-----	-----	-----	-----	12.4	12.4	-----	-----	-----	-----	13.9	13.8
-----	-----	-----	-----	24.1	24.2	-----	-----	-----	-----	24.4	24.7	-----	-----	-----	-----	25.2	25.1
-----	-----	-----	-----	20.0	21.0	-----	-----	-----	-----	21.0	20.7	-----	-----	-----	-----	17.8	17.7
8.0	8.3	11.9	13.9	16.4	16.7	9.8	10.0	12.3	14.7	17.4	18.1	9.2	9.2	11.2	14.5	18.0	18.6
-----	-----	18.7	16.8	12.3	12.6	-----	-----	18.4	16.1	12.0	11.9	-----	-----	19.5	15.9	12.3	12.1
2.3	1.9	3.6	3.9	4.1	4.4	2.3	1.9	3.8	4.2	4.4	4.5	2.0	1.4	3.3	3.3	3.9	3.9
-----	-----	6.0	4.3	6.0	6.8	-----	-----	5.4	4.1	6.0	6.8	-----	-----	5.3	4.3	5.9	7.2
-----	-----	-----	-----	3.9	4.2	-----	-----	-----	-----	5.7	5.3	-----	-----	-----	-----	4.9	4.6
-----	-----	-----	-----	15.4	15.2	-----	-----	-----	-----	14.2	14.6	-----	-----	-----	-----	16.6	16.3
-----	-----	-----	-----	19.1	19.2	-----	-----	-----	-----	18.3	18.3	-----	-----	-----	-----	18.9	18.8
-----	-----	-----	-----	18.3	18.0	-----	-----	-----	-----	18.4	18.5	-----	-----	-----	-----	18.5	19.1
-----	-----	-----	-----	16.2	16.0	-----	-----	-----	-----	16.0	15.7	-----	-----	-----	-----	16.1	15.3
4.9	5.4	10.0	10.6	10.8	10.8	5.0	5.4	9.6	10.5	10.7	10.8	5.7	6.4	10.5	10.4	11.1	12.1
43.3	43.3	53.2	54.1	55.8	57.0	54.0	54.0	58.5	59.0	61.0	61.6	58.0	60.0	71.5	78.0	80.7	82.6
27.2	26.3	26.1	28.3	43.9	45.1	24.5	24.5	27.9	27.7	45.0	44.5	30.0	29.8	30.5	49.2	50.0	50.0
-----	-----	16.9	19.5	31.8	31.7	-----	-----	16.7	19.5	31.8	30.3	-----	-----	17.2	21.3	29.7	31.0
-----	-----	14.7	15.2	19.9	22.2	-----	-----	13.3	14.6	20.1	21.2	-----	-----	14.6	15.1	22.0	24.5
-----	-----	-----	-----	37.2	38.2	-----	-----	-----	-----	37.9	40.0	-----	-----	-----	-----	46.8	47.9
-----	-----	-----	-----	61.8	61.0	-----	-----	-----	-----	55.9	57.1	-----	-----	-----	-----	52.4	53.2

³ Baked weight.
⁴ 8-ounce package.

⁶ 28-ounce package.
^c No. 2 can.

AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD FOR NOV. 15,

Article.	Unit.	St. Louis, Mo.						San Francisco, Calif.					
		Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	26.6	27.3	29.6	37.3	34.5	34.5	21.0	21.0	24.0	33.0	29.5	29.1
Round steak.....	Lb.	23.6	25.0	28.9	36.8	34.4	34.5	19.7	20.3	23.6	32.1	28.5	28.1
Rib roast.....	Lb.	20.1	20.0	24.9	30.8	29.5	28.6	21.3	22.0	23.4	30.5	28.6	28.7
Chuck roast.....	Lb.	16.0	16.5	20.5	25.3	21.3	20.8	15.5	15.5	16.7	23.9	20.1	20.1
Plate beef.....	Lb.	12.4	14.2	16.7	20.9	17.7	17.5	14.3	14.8	16.2	22.1	16.9	17.3
Pork chops.....	Lb.	17.8	20.3	30.1	39.5	39.7	36.7	24.2	24.5	36.3	44.9	43.9	43.2
Bacon.....	Lb.	25.8	27.5	48.0	56.5	49.4	48.2	31.4	35.7	53.7	60.5	59.2	59.1
Ham.....	Lb.	27.3	27.5	45.6	55.0	54.0	52.8	32.0	33.0	48.8	56.2	57.5	57.7
Lamb.....	Lb.	18.3	19.3	29.5	32.6	31.1	32.2	17.0	18.8	28.9	34.5	32.1	31.4
Hens.....	Lb.	16.5	18.0	24.8	32.2	32.8	31.9	24.8	24.3	33.4	49.9	47.3	47.9
Salmon (canned).....	Lb.			28.5	31.9	33.4	34.2			25.0	28.1	31.6	33.4
Milk, fresh.....	Qt.	8.8	8.8	13.0	14.0	16.0	16.0	10.0	10.0	12.1	14.0	14.2	15.0
Milk, evaporated (unsweetened).....	(¹)					15.8	16.2					15.1	15.2
Butter.....	Lb.	38.1	38.5	52.2	67.3	72.1	78.5	40.4	38.8	50.1	68.3	73.5	74.3
Oleomargarine.....	Lb.					39.9	40.5					38.8	38.5
Nut margarine.....	Lb.					35.5	35.0					35.1	35.6
Cheese.....	Lb.	20.3	21.8	35.3	42.6	40.7	41.3	21.0	21.0	32.4	39.3	44.7	44.1
Lard.....	Lb.	12.9	14.5	31.5	31.6	32.2	31.5	17.7	17.9	32.2	33.6	37.1	36.8
Crisco.....	Lb.					35.8	35.8					38.5	38.9
Eggs, strictly fresh.....	Doz.	38.9	33.3	47.1	67.6	60.3	71.9	65.0	55.8	63.8	84.4	79.1	88.7
Eggs, storage.....	Doz.	32.5	28.0	39.3	49.9	54.0	57.8	40.7	34.3	45.1	54.7	60.7	60.8
Bread.....	Lb.	5.6	6.0	10.1	10.0	10.0	10.0	5.9	6.0	9.3	10.0	10.0	11.7
Flour.....	Lb.	2.9	3.4	6.1	6.3	6.8	6.9	3.4	3.9	6.1	6.9	7.1	7.2
Corn meal.....	Lb.	2.5	2.6	6.4	5.2	5.7	5.5	3.5	3.7	7.4	7.3	7.1	7.2
Rollod oats.....	Lb.					6.5	6.4					8.6	8.5
Corn flakes.....	(²)					13.4	13.2					14.2	14.2
Cream of Wheat.....	(³)					24.3	24.4					24.7	24.6
Macaroni.....	Lb.					18.2	18.0					14.7	15.8
Rice.....	Lb.	8.1	8.7	11.2	13.7	16.9	16.8	8.5	8.5	10.8	14.1	15.3	16.0
Beans, navy.....	Lb.			18.7	15.2	11.9	11.7			17.4	15.0	10.3	9.8
Potatoes.....	Lb.	1.8	1.3	3.1	3.0	3.7	4.1	1.9	1.8	3.1	3.1	3.3	3.6
Onions.....	Lb.			4.4	3.9	6.1	6.8			3.4	2.6	4.4	5.2
Cabbage.....	Lb.					4.3	4.2						
Beans, baked.....	(³)					15.1	15.6					18.4	18.6
Corn, canned.....	(³)					16.5	16.7					18.7	18.0
Peas, canned.....	(³)					16.3	16.0					17.9	17.5
Tomatoes, canned.....	(³)					14.5	15.2					13.3	13.1
Sugar, granulated.....	Lb.	5.1	5.6	8.8	10.9	12.8	13.0	5.4	6.0	8.1	10.5	10.8	10.8
Tea.....	Lb.	55.0	55.8	63.2	70.1	73.1	72.0	50.0	50.0	53.9	57.0	59.5	58.9
Coffee.....	Lb.	24.4	24.8	28.2	28.7	45.7	46.7	32.0	32.0	30.5	31.4	45.3	44.7
Prunes.....	Lb.			17.0	19.3	30.2	30.2			14.7	17.1	23.6	22.4
Raisins.....	Lb.			16.8	17.4	21.3	22.6			13.2	13.8	18.3	20.3
Bananas.....	Doz.					32.9	36.0					46.0	46.0
Oranges.....	Doz.					49.9	44.4					54.2	57.7

¹ 15-16 ounce can.² Baked weight.³ 8-ounce package.

1913, 1914, 1917, 1918, 1919, AND OCT. 15, 1919, FOR 19 CITIES—Concluded.

Seattle, Wash.						Washington, D. C.							
Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.	Nov. 15—				Oct. 15, 1919.	Nov. 15, 1919.		
1913	1914	1917	1918			1913	1914	1917	1918				
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>		
23.6	22.8	26.7	36.3	36.0	35.2	26.5	27.1	36.0	51.0	48.8	47.9		
20.6	20.8	25.3	35.3	33.4	32.6	22.5	24.4	33.2	47.8	44.4	43.3		
20.0	19.0	22.1	31.2	29.3	28.5	21.0	21.0	27.7	39.4	36.8	37.0		
15.6	14.6	18.3	25.9	22.5	22.2	17.6	17.8	23.7	34.8	29.6	29.0		
12.8	12.4	15.4	21.1	18.3	17.8	12.8	12.7	18.4	23.7	18.9	18.6		
24.0	23.5	39.6	47.9	48.9	45.1	21.4	23.4	37.0	51.3	49.8	45.2		
32.0	33.8	52.2	62.8	61.5	59.2	26.4	26.8	49.2	58.9	52.6	50.0		
30.0	30.0	43.4	52.4	58.1	56.5	31.3	31.2	43.2	57.1	58.4	56.3		
18.4	17.6	29.6	35.4	32.3	32.2	19.1	21.0	33.7	40.9	38.4	39.0		
24.2	23.0	28.3	39.3	42.8	42.3	21.3	20.0	31.1	44.5	45.8	45.3		
-----	-----	28.8	30.5	34.1	34.2	-----	-----	26.9	33.9	33.0	34.5		
10.0	9.5	12.0	15.0	15.0	15.0	9.0	9.0	14.0	17.0	18.0	18.0		
-----	-----	-----	15.4	15.4	15.5	-----	-----	-----	-----	16.1	16.5		
40.8	39.4	54.2	68.9	73.9	74.5	40.3	41.4	53.4	70.0	74.1	78.1		
-----	-----	-----	-----	40.2	40.4	-----	-----	-----	-----	43.0	42.6		
-----	-----	-----	-----	36.8	36.7	-----	-----	-----	-----	35.3	35.5		
22.8	21.4	30.8	38.8	43.0	43.0	23.5	23.5	35.4	39.5	42.8	42.5		
16.9	16.0	30.7	33.8	38.5	39.1	15.0	14.6	32.5	34.8	35.6	36.1		
-----	-----	-----	-----	41.2	42.1	-----	-----	-----	-----	37.2	37.7		
59.2	57.9	66.6	88.1	82.5	90.1	47.9	42.3	64.5	78.2	71.7	84.3		
37.5	33.6	48.8	57.4	64.8	66.6	35.0	32.5	45.3	57.6	60.5	62.1		
5.6	6.0	10.4	10.3	11.5	11.5	5.7	5.7	10.1	10.1	10.1	9.9		
2.9	3.4	5.9	6.3	6.6	6.8	3.8	4.1	7.3	6.9	7.8	7.7		
3.2	3.4	7.4	7.3	7.4	7.3	2.6	2.8	6.7	5.8	5.6	5.6		
-----	-----	-----	-----	8.7	8.7	-----	-----	-----	-----	10.3	10.6		
-----	-----	-----	-----	14.8	14.9	-----	-----	-----	-----	13.9	14.0		
-----	-----	-----	-----	27.1	27.5	-----	-----	-----	-----	24.6	24.8		
-----	-----	-----	-----	16.5	16.3	-----	-----	-----	-----	19.9	20.4		
7.7	8.6	11.1	14.5	18.1	18.3	9.4	9.4	12.1	14.4	18.2	18.1		
-----	-----	18.7	16.8	11.8	11.9	-----	-----	20.1	15.4	12.6	12.6		
1.4	1.3	2.2	2.5	3.0	3.7	1.8	1.4	3.3	3.3	3.9	3.7		
-----	-----	4.5	4.0	5.5	7.1	-----	-----	5.2	3.5	6.6	6.7		
-----	-----	-----	-----	4.6	4.9	-----	-----	-----	-----	5.2	4.5		
-----	-----	-----	-----	21.5	21.6	-----	-----	-----	-----	14.9	14.7		
-----	-----	-----	-----	20.4	20.3	-----	-----	-----	-----	19.1	18.9		
-----	-----	-----	-----	21.3	20.6	-----	-----	-----	-----	18.6	19.0		
-----	-----	-----	-----	17.7	17.6	-----	-----	-----	-----	16.8	17.4		
6.1	6.6	8.9	10.9	10.9	11.6	5.1	5.7	9.6	10.5	11.1	11.5		
50.0	50.0	55.0	60.4	63.3	63.2	57.5	57.5	63.0	72.1	77.9	75.9		
28.0	30.0	31.2	32.1	47.8	48.2	28.8	28.8	28.6	29.7	48.4	47.7		
-----	-----	14.4	17.7	27.3	27.7	-----	-----	17.7	20.4	32.1	31.3		
-----	-----	13.4	15.2	21.3	22.4	-----	-----	14.8	16.0	21.2	22.8		
-----	-----	-----	-----	50.0	50.0	-----	-----	-----	-----	44.2	44.8		
-----	-----	-----	-----	56.1	56.6	-----	-----	-----	-----	56.3	57.6		

*28-ounce package.

*No. 2 can.

* Pound.

RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.		Columbus, Ohio.	
		Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	50.3	51.1	31.8	31.8	37.0	37.7	30.8	30.4	36.4	35.9
Round steak.....	Lb.	47.8	46.9	26.7	27.1	36.4	37.2	29.8	29.5	34.4	32.9
Rib roast.....	Lb.	36.5	37.3	24.9	24.1	30.0	30.0	25.4	25.7	30.0	28.7
Chuck roast.....	Lb.	28.5	29.2	17.4	17.9	24.2	25.4	19.2	19.1	25.8	25.1
Plate beef.....	Lb.	15.5	15.9	11.8	12.7	18.8	18.8	17.5	17.4	18.5	18.5
Pork chops.....	Lb.	47.7	45.0	44.2	40.9	44.4	44.7	40.8	38.1	38.0	37.3
Bacon.....	Lb.	55.2	54.8	62.0	60.0	56.0	55.4	46.5	44.8	49.2	49.1
Ham.....	Lb.	63.3	59.8	59.6	59.5	52.3	53.0	52.5	49.5	54.2	51.6
Lamb.....	Lb.	36.2	35.4	27.7	26.9	39.2	41.1	30.0	29.4	27.5	30.0
Hens.....	Lb.	44.0	43.5	32.8	30.6	49.2	47.9	38.3	36.6	37.7	32.1
Salmon (canned).....	Lb.	37.8	37.9	44.0	43.2	32.4	33.1	34.3	35.5	34.3	31.9
Milk, fresh.....	Qt.	16.0	18.0	15.5	15.6	23.5	24.7	14.0	15.0	14.0	14.7
Milk, evaporated (unsweetened). (*)	Lb.	16.8	16.6	17.9	18.3	16.7	16.9	15.5	16.2	16.7	16.5
Butter.....	Lb.	66.3	69.7	68.7	70.2	68.6	73.6	72.1	76.4	73.1	77.2
Oleomargarine.....	Lb.	41.8	41.3	45.0	46.3	45.0	45.0	41.1	42.0	42.4	42.7
Nut margarine.....	Lb.	35.4	35.4	---	---	45.7	45.7	34.3	34.6	35.0	35.2
Cheese.....	Lb.	42.6	43.2	44.7	46.3	41.2	41.9	47.7	43.4	42.2	43.0
Lard.....	Lb.	35.8	35.6	38.8	38.6	37.3	38.3	32.1	32.1	33.7	34.2
Crisco.....	Lb.	36.5	36.3	43.7	44.0	37.9	39.0	34.5	35.1	36.2	36.5
Eggs, strictly fresh.....	Doz.	87.6	96.3	73.9	87.1	56.7	68.6	63.0	74.0	64.2	77.2
Eggs, storage.....	Doz.	60.2	62.2	60.0	62.8	54.8	57.0	55.5	59.3	56.2	60.6
Bread.....	Lb. ³	10.7	10.4	12.3	12.4	10.0	10.0	9.9	9.9	9.8	9.8
Flour.....	Lb.	7.3	7.4	8.0	8.1	7.8	7.7	7.1	7.4	6.9	6.9
Corn meal.....	Lb.	7.9	8.8	7.9	8.0	5.7	5.3	6.0	5.5	6.3	5.8
Roll'd oats.....	Lb.	9.7	9.7	9.3	9.4	10.4	10.4	8.2	7.3	9.4	10.2
Corn flakes.....	(*)	13.5	13.5	14.6	14.5	14.9	14.9	13.8	13.9	14.3	14.1
Cream of Wheat.....	(*)	23.9	23.8	30.0	30.0	25.0	25.0	24.8	24.8	25.0	24.9
Macaroni.....	Lb.	22.5	23.0	20.0	20.3	21.1	20.9	16.7	17.1	18.6	19.8
Rice.....	Lb.	16.9	17.0	15.3	16.7	14.4	14.8	17.4	17.8	17.5	18.2
Beans, navy.....	Lb.	11.8	11.5	13.4	12.9	14.5	14.8	10.9	10.7	11.6	11.3
Potatoes.....	Lb.	3.4	3.5	2.7	3.5	4.7	4.7	4.3	4.3	4.4	4.1
Onions.....	Lb.	6.2	6.3	5.7	6.5	7.5	7.0	5.8	6.5	6.8	7.4
Cabbage.....	Lb.	4.3	4.4	4.8	5.1	6.4	5.9	4.6	4.5	5.7	5.1
Beans, baked.....	(*)	16.5	16.2	22.4	22.2	15.4	15.4	15.2	15.7	16.7	16.6
Corn, canned.....	(*)	21.9	21.3	18.4	18.8	21.2	21.0	17.2	16.7	16.4	16.5
Peas, canned.....	(*)	20.5	20.0	18.6	18.8	22.1	21.8	17.6	17.1	16.4	16.5
Tomatoes, canned.....	(*)	16.3	16.2	18.0	17.9	15.6	15.6	15.1	15.3	15.3	14.9
Sugar, granulated.....	Lb.	11.0	11.0	12.4	13.7	10.9	11.1	11.4	14.4	11.1	12.6
Tea.....	Lb.	63.0	60.8	75.0	74.4	81.2	81.3	77.3	77.1	82.1	82.1
Coffee.....	Lb.	46.7	47.6	58.1	56.8	47.6	48.4	42.4	42.5	50.5	49.3
Prunes.....	Lb.	29.9	29.2	27.0	26.5	29.2	30.0	26.2	28.3	24.5	31.5
Raisins.....	Lb.	21.8	23.0	19.4	21.5	21.3	22.5	20.2	22.1	21.8	24.2
Bananas.....	Doz.	38.7	40.6	47.5	47.5	42.9	44.0	36.4	39.0	39.1	42.1
Oranges.....	Doz.	61.0	61.2	53.8	56.6	51.5	47.0	46.6	41.9	51.5	53.1

¹ The steak for which prices are here quoted is known as "sirloin" in most of the cities included in this report, but in this city is called "rump" steak.

³ 15-16 ounce can.

FOOD FOR 31 CITIES ON OCT. 15 AND NOV. 15, 1919.

Dallas, Tex.		Fall River, Mass.		Houston, Tex.		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.	
Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
34.2	36.9	39.8	42.5	32.5	32.8	33.7	35.2	37.9	38.8	34.8	34.5
32.9	36.6	48.9	47.1	32.5	32.8	33.4	34.4	35.5	36.1	31.9	31.5
29.8	31.2	39.9	34.4	25.8	26.7	25.3	26.9	27.7	28.5	26.0	25.7
24.2	26.4	26.3	26.6	22.4	22.7	22.6	24.3	23.0	22.8	20.5	19.8
21.8	22.9			18.6	18.8	16.7	17.4	16.0	16.1	15.7	15.0
42.3	44.8	46.5	49.9	41.0	41.8	40.5	39.6	42.7	43.7	41.3	37.4
36.9	34.6	46.8	49.0	64.1	59.3	51.1	49.5	55.5	52.9	55.2	52.7
55.0	57.1	53.3	52.6	51.9	50.0	54.7	53.4	52.7	50.8	54.0	53.2
37.0	32.5	32.9	33.6	38.2	35.6	37.5	35.0	34.0	34.3	28.9	29.1
35.0	35.3	46.7	46.3	38.3	37.8	36.0	34.4	43.2	42.4	33.8	33.8
35.5	36.9	33.4	33.6	22.8	33.8	28.2	28.3	34.4	37.5	32.9	33.1
19.9	21.0	15.3	15.7	18.8	20.0	13.7	14.0	20.0	20.0	15.3	16.0
17.2	18.1	14.2	16.6	16.8	16.5	16.9	17.2	16.6	16.8	17.3	17.7
67.1	71.8	68.0	68.9	68.9	74.3	71.5	75.7	72.9	77.1	70.8	76.4
37.5	37.0	40.1	41.4	43.1	42.9	44.3	44.1	43.3	43.6	41.2	41.3
36.9	35.7	36.3	36.5	37.3	37.3	35.2	35.6	38.3	39.0	35.9	35.4
42.8	43.3	42.9	42.9	39.1	39.6	42.3	45.1	40.6	41.2	44.1	44.4
34.9	36.8	35.3	35.6	34.2	33.7	33.4	34.0	35.5	35.6	37.8	38.3
36.1	36.8	37.3	36.9	33.7	33.8	37.3	37.5	37.4	38.4	39.3	39.8
37.5	65.0	91.6	106.3	57.2	67.7	65.6	74.7	68.8	76.3	63.0	70.9
61.3	60.9	63.1	63.1	52.5	56.6	57.8	59.4	57.0	60.0	50.0	59.3
10.0	10.0	10.9	10.9	9.2	9.2	9.7	9.7	10.0	10.0	10.0	10.0
7.3	7.6	7.7	7.7	7.3	7.4	7.2	7.1	7.7	7.7	6.7	7.0
6.5	6.9	8.4	8.8	5.9	6.0	6.1	5.6	5.7	5.5	7.0	6.9
10.5	10.9	9.7	9.8	9.8	9.8	9.4	10.0	10.9	10.8	11.1	11.6
13.9	13.9	14.5	14.2	14.5	14.6	14.8	14.7	15.1	15.0	15.0	15.0
26.4	27.0	25.1	25.5	24.8	24.8	25.6	25.1	25.0	25.2	26.1	25.9
20.0	19.4	22.5	22.9	19.6	20.1	20.8	21.5	20.7	20.6	18.7	19.0
18.8	18.6	17.2	17.3	15.9	16.1	19.5	19.4	16.2	16.1	19.1	18.7
13.4	13.7	12.0	12.1	12.6	12.4	12.1	11.9	14.2	13.9	13.0	12.3
5.0	5.1	3.6	3.5	4.4	4.6	3.7	3.9	4.8	4.8	4.1	4.3
6.2	7.1	7.1	7.1	6.3	6.9	7.1	7.6	7.7	8.0	7.6	7.9
5.8	6.3	4.4	4.4	5.5	5.6	4.8	4.7	6.5	6.4	4.4	4.5
18.6	18.8	16.5	16.4	18.2	18.3	18.1	18.1	17.8	17.4	17.0	17.3
20.0	21.3	20.0	20.5	17.9	17.9	18.0	18.4	20.2	20.9	16.4	16.4
20.3	21.6	20.9	20.8	19.6	19.7	17.1	17.5	22.1	21.4	16.4	16.8
15.1	15.3	16.1	16.9	14.4	14.6	16.2	15.9	15.4	15.4	15.8	15.5
11.9	12.8	11.0	11.3	11.3	16.3	11.3	13.3	11.3	13.2	12.7	13.0
85.4	76.0	59.0	59.5	65.4	64.4	84.7	85.0	86.9	84.3	81.7	78.8
53.3	55.0	49.2	50.3	44.5	45.7	51.4	51.0	53.7	53.8	48.3	47.5
31.3	30.2	25.1	25.8	28.2	28.1	30.0	31.3	33.3	33.7	31.9	29.6
21.3	22.8	22.3	23.2	19.1	18.5	24.4	24.7	25.3	25.1	23.3	25.4
39.3	41.0	39.8	40.3	37.1	39.2	39.6	34.3	38.3	40.0	46.0	51.7
50.5	50.9	52.6	49.2	49.3	49.2	49.1	49.9	45.0	35.0	53.0	57.3

* Baked weight.
 † 8-ounce package.

* 25-ounce package.
 † No. 2 can.

RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Little Rock, Ark.		Louisville, Ky.		Manchester, N. H.		Memphis, Tenn.	
		Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.
Sirloin steak.....	Lb.	35.6	34.7	33.3	33.1	¹ 54.6	¹ 54.5	36.5	36.3
Round steak.....	Lb.	33.3	32.5	31.3	30.4	49.2	47.8	34.0	33.6
Rib roast.....	Lb.	30.0	27.9	27.2	26.2	31.6	30.3	29.3	28.2
Chuck roast.....	Lb.	23.7	23.7	22.8	22.3	28.1	26.6	24.2	22.8
Plate beef.....	Lb.	17.8	17.7	19.1	18.5			18.8	18.1
Pork chops.....	Lb.	43.8	41.3	42.1	37.6	48.1	44.3	42.4	40.7
Bacon.....	Lb.	55.5	55.9	54.8	52.0	50.1	47.8	55.9	53.6
Ham.....	Lb.	53.5	53.2	53.9	48.8	51.3	48.9	54.1	54.6
Lamb.....	Lb.	36.9	35.6	30.0	29.2	35.4	36.1	37.5	38.0
Hens.....	Lb.	36.3	34.4	37.6	37.9	46.4	45.9	37.2	36.6
Salmon (canned).....	Lb.	34.2	34.2	31.8	32.3	35.5	36.2	36.2	35.7
Milk, fresh.....	Qt.	20.0	20.0	15.0	15.0	15.0	15.0	18.0	19.3
Milk, evaporated (unsweet- ened).....	(¹)	18.1	18.2	16.5	17.2	17.7	18.1	17.8	17.3
Butter.....	Lb.	69.7	73.8	72.0	77.5	70.9	76.4	72.7	76.9
Oleomargarine.....	Lb.	44.5	43.5	44.7	43.8	42.9	43.4	43.1	43.1
Nut margarine.....	Lb.	38.5	37.8	35.0	33.5	33.5	34.8	42.3	40.8
Cheese.....	Lb.	41.4	42.5	40.7	41.8	42.9	42.9	41.2	42.1
Lard.....	Lb.	38.5	39.3	34.7	34.8	36.9	37.8	36.3	36.6
Crisco.....	Lb.	39.5	39.8	35.0	35.2	38.2	38.6	37.9	36.8
Eggs, strictly fresh.....	Doz.	59.8	68.6	60.5	74.7	84.4	104.5	63.6	68.7
Eggs, storage.....	Doz.	57.0	61.4	55.0	59.3	60.9	63.8	57.5	56.3
Bread.....	Lb. ³	10.0	10.0	10.0	10.0	9.5	9.5	10.0	10.0
Flour.....	Lb.	7.4	7.4	7.3	7.3	7.7	7.9	7.4	7.4
Corn meal.....	Lb.	5.8	5.6	5.5	5.2	7.4	7.4	5.5	5.3
Rolled oats.....	Lb.	11.1	11.1	9.7	9.8	9.7	9.7	10.8	10.9
Corn flakes.....	(⁴)	14.8	14.6	14.0	14.0	14.9	14.9	14.3	14.2
Cream of Wheat.....	(⁵)	25.4	25.4	25.7	25.9	25.1	25.0	24.4	24.3
Macaroni.....	Lb.	18.6	19.0	18.0	17.5	23.5	24.0	19.7	18.7
Rice.....	Lb.	17.4	17.0	18.4	18.5	16.7	17.1	16.6	16.5
Beans, navy.....	Lb.	13.6	13.1	12.4	12.1	12.4	12.5	13.6	13.9
Potatoes.....	Lb.	4.1	4.2	3.9	3.7	3.2	3.4	4.6	4.5
Onions.....	Lb.	7.2	8.0	5.3	5.8	6.3	6.3	6.9	7.9
Cabbage.....	Lb.	5.3	5.7	4.8	4.6	3.5	3.7	5.3	5.1
Beans, baked.....	(⁶)	17.1	16.6	16.1	15.8	18.2	18.4	18.7	18.0
Corn, canned.....	(⁶)	17.8	17.9	17.9	18.0	21.8	21.8	18.8	18.3
Peas, canned.....	(⁸)	18.2	18.4	17.9	17.9	21.0	21.3	18.8	18.5
Tomatoes, canned.....	(⁹)	15.0	14.9	15.0	15.3	17.5	18.3	16.2	16.2
Sugar, granulated.....	Lb.	12.0	17.6	11.1	11.7	11.2	11.2	11.5	21.5
Tea.....	Lb.	86.4	87.4	79.1	79.9	61.9	61.9	89.9	89.9
Coffee.....	Lb.	52.5	51.7	48.1	49.3	51.0	51.9	53.5	52.3
Prunes.....	Lb.	20.7	27.5	27.2	29.8	27.6	28.5	28.4	35.8
Raisins.....	Lb.	23.3	23.2	20.5	23.1	23.0	24.4	21.3	24.2
Bananas.....	Doz.	34.4	36.3	37.1	36.7	40.0	38.8	40.5	40.6
Oranges.....	Doz.	54.7	52.9	44.5	45.0	56.1	56.6	55.3	49.0

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

² 15-16 ounce can.

FOOD FOR 31 CITIES ON OCT. 15 AND NOV. 15, 1919—Continued.

Minneapolis, Minn.		Mobile, Ala.		Newark, N. J.		New Haven, Conn.		Norfolk, Va.		Omaha, Nebr.	
Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
32.4	31.9	32.9	32.7	44.1	44.6	52.6	52.7	44.1	44.9	36.4	34.8
29.1	29.5	32.3	32.3	45.0	45.2	47.7	46.9	39.9	40.0	32.5	31.6
25.4	25.9	30.0	29.5	35.9	35.8	37.6	36.9	36.6	34.8	26.0	25.8
20.8	20.4	23.9	23.4	27.6	26.3	30.9	30.6	26.6	25.9	22.2	21.0
13.9	13.8	19.8	19.3	18.9	18.5			18.8	18.3	16.2	15.1
40.1	36.8	45.9	46.8	47.2	44.7	48.1	43.6	43.0	42.3	41.1	38.6
55.4	54.5	60.0	58.8	47.6	46.1	54.7	53.7	52.6	50.6	56.3	54.7
54.2	51.0	54.5	52.3	50.0	50.0	57.9	55.2	48.3	50.0	56.5	55.0
27.6	28.9	35.0	33.6	36.6	35.4	37.8	37.1	38.3	37.4	32.0	31.9
30.1	28.8	43.8	41.4	41.5	41.6	46.4	45.6	46.0	44.8	33.5	32.9
42.1	41.9	33.3	34.5	35.4	37.8	36.6	36.5	30.7	34.7	37.1	37.5
13.0	13.0	17.5	22.0	16.7	17.3	16.0	16.0	21.0	21.0	15.2	15.2
17.7	17.8	17.6	18.0	15.7	15.7	16.5	16.5	16.0	16.2	17.5	17.6
66.6	71.9	70.9	76.9	75.3	79.1	66.3	70.4	72.6	76.4	70.9	75.8
41.1	41.4	44.9	44.5	42.7	42.5	42.9	43.1	47.2	45.8	44.2	44.2
33.1	33.1	41.8	40.9	35.7	35.5	36.4	36.2	39.0	39.0	35.3	35.8
40.2	41.4	41.2	43.7	43.9	43.9	42.7	42.8	41.6	41.7	42.5	43.6
35.0	35.5	37.2	38.9	38.6	37.2	35.5	36.4	37.8	39.2	38.1	37.6
38.0	38.0	36.5	38.9	36.4	36.2	35.7	35.6	38.3	37.8	40.0	39.7
62.9	71.8	61.4	75.0	82.7	86.6	84.9	96.5	64.3	75.7	64.3	73.2
55.0	58.5	58.0	64.5	63.1	64.3	59.1	63.3	57.3	61.8	56.4	59.5
9.6	9.6	9.6	9.6	9.8	9.8	10.6	10.6	9.9	9.9	10.0	10.0
7.2	7.4	7.1	7.1	7.4	7.5	7.3	7.5	7.5	7.6	6.8	7.0
6.3	6.4	6.3	6.0	7.5	7.3	7.5	7.8	6.0	5.9	6.6	6.7
7.7	7.7	11.1	11.2	8.9	8.9	9.9	9.6	10.2	10.1	9.0	9.2
14.5	14.6	14.7	14.7	12.4	12.3	13.9	14.2	14.6	14.4	14.7	15.0
25.2	25.4	25.5	25.2	23.9	24.1	24.4	24.5	25.5	25.8	25.6	25.9
17.2	17.3	19.2	19.1	21.0	21.8	20.8	20.7	19.2	19.3	19.5	21.6
17.8	18.8	16.6	16.2	17.1	17.2	17.3	17.4	18.1	19.0	18.2	18.6
11.6	11.6	14.1	14.2	12.7	12.3	12.4	12.1	13.5	14.0	13.4	13.2
3.5	3.4	4.8	4.8	4.5	4.3	3.3	3.5	4.3	4.0	4.2	4.3
5.9	6.7	7.3	7.3	6.8	7.3	6.9	7.2	7.5	7.8	6.6	7.8
2.8	3.8	5.2	5.6	4.8	4.4	3.8	3.7	5.2	4.6	4.1	4.4
18.7	18.4	18.5	18.2	15.0	14.9	17.7	17.6	14.3	14.1	20.1	20.0
17.4	17.5	19.5	19.8	20.7	20.6	21.9	21.7	20.5	20.8	17.8	18.3
17.1	16.9	18.9	19.6	19.9	19.8	21.6	22.1	21.7	21.2	18.4	18.9
16.7	16.4	15.8	15.7	15.2	15.8	16.1	16.1	17.5	18.0	17.2	17.5
12.3	13.4	11.3	23.0	10.9	11.0	11.1	11.6	11.3	11.5	12.1	13.1
64.5	62.6	79.2	78.4	56.4	56.6	61.4	62.9	80.9	83.7	76.6	76.9
53.1	53.0	46.3	46.2	45.8	46.1	50.0	50.5	52.1	52.1	52.2	52.4
27.9	29.4	27.1	27.8	29.9	28.2	29.2	28.9	28.3	31.3	29.4	29.9
18.4	19.4	19.8	25.2	19.9	21.6	20.9	24.1	21.1	21.8	23.9	25.8
41.7	44.3	30.5	30.0	39.1	40.4	35.8	37.9	38.9	39.5	43.8	46.3
57.8	57.8	56.1	41.7	63.8	65.0	56.4	61.3	53.6	50.0	55.9	58.9

³ Baked weight.
⁴ 8-ounce package.

⁵ 28-ounce package.
⁶ No. 2 can.

RETAIL PRICES OF THE PRINCIPAL ARTICLES OF

Article.	Unit.	Peoria, Ill.		Portland, Me.		Portland, Oreg.		Providence, R. I.	
		Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	33.2	32.5	156.4	155.3	30.5	30.6	66.3	65.3
Round steak.....	Lb.	31.7	30.3	47.5	46.8	29.8	29.1	55.0	53.6
Rib roast.....	Lb.	24.8	24.3	31.1	31.1	28.2	27.9	41.2	42.0
Chuck roast.....	Lb.	21.6	21.2	24.8	24.4	21.6	20.9	35.6	34.8
Plate beef.....	Lb.	16.0	15.3			15.5	15.9		
Pork chops.....	Lb.	39.1	34.9	47.6	47.6	44.8	41.5	53.3	48.7
Bacon.....	Lb.	54.9	51.2	49.9	48.8	58.6	55.6	50.2	48.1
Ham.....	Lb.	54.9	52.3	54.5	52.8	57.5	52.9	62.7	61.1
Lamb.....	Lb.	33.6	31.3	34.1	33.5	31.0	30.7	40.9	41.4
Hens.....	Lb.	34.7	32.5	46.2	45.4	38.3	37.5	48.5	47.2
Salmon (canned).....	Lb.	32.9	33.3	33.3	34.9	39.1	40.8	39.8	40.0
Milk, fresh.....	Qt.	14.3	14.3	14.5	15.0	15.9	15.9	16.5	17.0
Milk, evaporated (unsweetened).....	(¹)	17.6	17.7	17.3	17.4	17.1	17.2	17.2	17.4
Butter.....	Lb.	69.3	72.9	71.3	76.9	74.1	74.1	67.9	72.3
Oleomargarine.....	Lb.	44.3	44.5	44.0	44.6	43.1	43.0	41.0	40.5
Nut margarine.....	Lb.	35.9	35.5	35.9	35.9	38.5	38.6	34.6	35.0
Cheese.....	Lb.	43.3	43.7	41.4	44.8	42.9	43.8	42.2	42.8
Lard.....	Lb.	36.7	36.1	36.2	37.1	40.9	40.7	36.4	36.6
Crisco.....	Lb.	39.5	38.7	38.3	38.0	41.9	42.1	37.4	37.4
Eggs, strictly fresh.....	Doz.	63.2	74.4	81.8	98.3	74.6	87.9	87.7	104.7
Eggs, storage.....	Doz.	57.0	60.8	60.9	67.4	64.2	69.5	61.4	62.8
Bread.....	Lb. ²	10.0	10.0	11.0	11.0	9.9	10.7	10.6	10.6
Flour.....	Lb.	7.7	8.0	7.4	7.6	6.5	6.8	7.9	8.0
Corn meal.....	Lb.	6.5	6.3	7.0	6.9	7.7	7.6	6.6	6.4
Rollod oats.....	Lb.	9.5	9.1	8.2	8.3	9.0	9.1	8.9	9.3
Corn flakes.....	(⁴)	14.7	14.7	14.3	14.3	14.5	14.6	14.1	13.9
Cream of Wheat.....	(⁵)	26.6	26.0	25.0	25.2	27.9	28.2	24.8	24.7
Macaroni.....	Lb.	19.1	19.1	22.7	23.0	19.1	18.7	21.7	22.6
Rice.....	Lb.	17.5	17.9	15.7	16.6	17.1	18.8	17.4	17.4
Beans, navy.....	Lb.	12.4	12.2	12.0	12.1	11.9	11.8	11.9	11.7
Potatoes.....	Lb.	3.6	3.6	2.9	3.4	3.1	3.3	3.6	3.7
Onions.....	Lb.	7.3	7.5	6.0	6.3	4.9	5.6	6.2	6.6
Cabbage.....	Lb.	4.5	4.4	2.3	2.7	3.7	3.4	3.8	4.1
Beans, baked.....	(⁶)	18.5	18.0	19.3	20.0	23.4	21.9	16.8	16.4
Corn, canned.....	(⁶)	17.4	17.4	21.0	19.8	22.3	22.3	20.2	20.0
Peas, canned.....	(⁶)	18.6	18.5	20.7	20.8	22.3	22.5	20.2	19.8
Tomatoes, canned.....	(⁶)	16.3	15.9	19.5	19.0	18.7	18.4	16.8	17.3
Sugar, granulated.....	Lb.	12.0	13.1	10.9	11.0	11.0	11.8	11.0	11.1
Ten.....	Lb.	73.4	73.7	63.5	63.6	63.2	63.2	59.9	60.2
Coffee.....	Lb.	48.9	46.9	50.6	51.0	50.7	50.4	52.2	52.1
Prunes.....	Lb.	30.4	31.7	27.6	28.1	23.9	25.2	30.5	29.0
Raisins.....	Lb.	21.4	22.4	20.6	24.3	19.7	20.9	21.4	22.8
Bananas.....	Doz.	10.5	11.0	37.1	38.3	43.8	45.0	39.3	42.0
Oranges.....	Doz.	52.5	53.7	61.5	61.7	59.6	64.6	66.2	64.3

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

² 15-16 ounce can.

FOOD FOR 31 CITIES ON OCT. 15 AND NOV. 15, 1919—Concluded.

Richmond, Va.		Rochester, N. Y.		St. Paul, Minn.		Salt Lake, Utah.		Scranton, Pa.		Springfield, Ill.	
Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.	Oct. 15, 1919.	Nov. 15, 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
42.2	42.3	38.8	38.0	33.4	31.3	33.2	30.9	41.1	43.2	33.4	31.5
38.9	38.5	36.3	35.0	29.3	27.5	29.6	28.8	38.8	37.5	32.7	31.4
34.7	32.7	30.9	30.6	27.1	27.3	25.4	25.3	34.9	34.4	24.5	22.8
28.8	27.9	27.8	27.2	22.3	21.9	21.3	20.8	28.9	27.5	20.5	19.9
23.2	22.3	18.9	18.8	14.4	13.7	15.8	15.1	18.8	17.4	16.3	15.5
44.4	43.1	44.8	41.4	38.4	35.4	43.5	41.3	48.1	45.1	39.5	37.6
51.5	48.5	43.6	42.4	48.6	47.4	53.7	53.7	57.0	53.7	50.0	45.7
51.8	49.0	50.9	49.1	52.1	48.8	55.8	53.0	55.0	50.0	51.3	48.8
40.4	39.4	32.0	30.1	25.7	25.9	27.3	27.4	41.6	39.9	33.3	33.3
45.0	41.3	43.4	41.1	30.3	28.9	34.4	35.6	46.6	45.5	31.0	33.0
27.2	27.4	33.7	35.8	36.8	36.9	33.8	35.0	37.4	39.2	35.3	35.6
15.7	16.7	14.0	14.5	13.0	13.0	12.5	12.5	14.0	15.0	16.7	16.7
17.1	17.1	16.8	17.3	17.4	17.4	17.0	16.9	15.8	16.1	18.2	18.3
73.6	79.8	69.4	72.9	66.9	72.9	70.3	74.4	66.2	69.6	72.7	77.8
43.9	43.8	43.1	44.6	40.5	41.1	42.8	42.9	43.4	44.4	44.3	45.4
36.8	37.3	34.3	34.6	34.6	34.6	38.4	39.3	36.9	37.6	36.3	36.0
43.5	43.4	41.2	42.0	40.8	41.9	42.9	42.7	41.5	41.1	43.5	44.6
36.4	37.4	35.8	36.4	35.5	35.4	39.7	39.8	37.1	37.5	36.3	36.3
38.6	38.7	36.1	36.7	41.0	41.2	42.9	42.3	37.5	37.9	41.9	40.2
64.0	76.9	74.2	94.4	62.4	73.8	70.4	82.7	72.6	88.6	61.1	72.8
60.2	64.5	58.5	61.2	56.9	60.5	58.9	65.2	59.9	63.1	58.0	61.1
10.6	11.1	10.0	10.0	9.2	9.4	10.1	10.1	10.0	10.0	10.0	10.0
7.6	7.7	7.4	7.5	7.3	7.5	6.1	6.2	7.8	7.9	7.4	7.6
6.3	6.1	6.9	7.0	6.6	6.5	7.3	7.4	9.0	8.7	6.5	6.7
10.8	10.8	7.1	7.4	8.0	7.8	8.9	9.2	10.5	10.4	10.1	10.4
14.8	14.7	13.6	13.8	14.5	14.4	14.8	14.7	14.2	14.2	15.0	14.9
25.7	25.7	24.5	24.8	25.5	25.6	26.4	26.1	25.4	25.4	27.1	27.5
18.6	18.7	20.5	20.8	19.2	19.2	19.5	19.0	21.6	21.8	19.8	18.9
17.8	19.1	17.8	18.0	18.6	19.0	17.7	17.8	18.0	18.0	18.4	18.8
14.0	14.0	12.1	12.1	11.9	12.0	13.0	12.9	15.2	14.8	12.8	12.7
4.8	4.8	2.7	2.9	3.2	3.2	3.1	3.3	3.4	3.4	3.8	4.1
6.5	6.9	6.2	6.4	6.2	6.7	4.6	6.1	6.7	6.3	6.6	6.9
5.7	5.1	3.5	3.4	2.5	3.5	4.6	5.4	2.5	3.0	4.3	4.4
14.7	14.9	14.8	15.2	18.9	19.3	19.4	19.3	16.5	16.3	18.6	18.2
19.2	19.4	19.5	19.8	17.5	18.0	18.1	18.1	20.0	20.0	17.1	17.2
22.1	22.4	19.1	19.7	16.7	17.1	18.1	18.0	18.5	19.1	17.3	17.9
16.9	18.4	17.3	17.4	16.3	16.0	17.5	17.2	17.0	17.5	17.2	16.7
11.2	11.3	10.9	11.0	11.9	13.8	11.8	12.3	11.0	11.6	15.3	13.9
81.9	83.3	61.0	63.3	63.9	63.4	78.5	79.9	64.7	67.2	85.3	85.3
47.1	47.4	45.1	46.4	50.1	50.8	56.4	58.6	49.3	50.0	50.1	50.6
31.7	33.3	27.4	28.7	29.8	29.1	21.0	18.8	28.3	27.9	30.5	31.7
20.1	21.9	19.4	21.8	19.4	22.9	22.3	23.1	20.9	21.8	23.8	25.0
44.7	45.4	40.3	41.1	55.0	55.0	50.0	51.0	34.6	34.6	41.3	38.3
55.4	50.9	57.6	57.2	56.8	58.4	57.5	56.4	57.5	58.6	51.0	52.2

³ Baked weight.

⁴ 8-ounce package.

⁵ 28-ounce package.

⁶ No. 2 can.

⁷ Pound.

Comparison of Retail Food Costs in 50 Cities in the United States.

THE table following shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles¹ combined, in November, 1919, compared with the average cost in the year 1913, in November, 1918, and in October, 1919. For 11 other cities, comparisons are given for the one-year and one-month periods. These cities have been scheduled by the Bureau at different dates since 1913.

The average family expenditure is based on the prices sent to the Bureau each month by retail dealers, and on the average family consumption of these articles in each city.

The amounts given as the expenditures in November, 1918, and in October and November, 1919, represent the amounts necessary to buy a year's supply of these 22 food articles when purchased at the average retail prices charged in the months specified. This method makes it easier to note the increase over the year 1913. The year 1913 has been selected for the comparison because it was the last year before the war when prices were normal.

No attempt should be made in this table to compare one city with another, as the average number of persons in the family varies according to the city, and these 22 food articles represent a varying proportion of the entire food budgets according to locality. This table is intended to show merely comparisons in the retail cost of these 22 food articles for each city. Effort is made to secure prices on similar grades of commodities in all cities. Local customs, however, must be taken into consideration. For example:

1. In Boston, Mass.; Fall River, Mass.; Manchester, N. H.; New Haven, Conn.; Portland, Me.; and Providence, R. I., very little fresh plate beef is sold, and prices are not secured from these cities for this article.

2. The cut of beef known as "sirloin" in Boston, Mass.; Manchester, N. H.; Philadelphia, Pa.; and Providence, R. I., would be known as "porterhouse" in other cities. In these four cities, owing to the method of dividing the round from the loin, there is no cut that corresponds to "sirloin" in other cities. There is also a greater amount of trimming demanded by the trade in these cities.

3. The most of the sales in Newark, N. J., are on whole ham instead of the sliced, as in other cities.

While it is advised that comparisons should not be made as between cities, without taking these and other facts relative to local

¹ Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

customs and transportation into consideration, the figures do represent a trend in the retail cost of these articles to the average family in each city.

RETAIL COST OF 22 FOOD ARTICLES¹ COMBINED, IN NOVEMBER, 1919, COMPARED WITH THE COST IN OCTOBER, 1919, NOVEMBER, 1918, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

City.	Average family expenditure for 22 food articles, combined.				Percentage increase November, 1919, compared with—		
	1913	November, 1918. ²	1919		1913	November, 1918.	October, 1919.
			October. ²	November. ²			
Atlanta.....	\$361.00	\$660.67	\$680.22	\$701.35	94	6	3
Baltimore.....	335.15	681.16	662.23	666.96	99	³ 2	1
Birmingham.....	377.53	712.05	741.97	771.53	104	8	4
Boston.....	388.16	692.27	723.12	735.00	89	6	2
Bridgeport.....		683.91	675.71	695.16		2	3
Buffalo.....	318.15	606.76	612.83	620.04	95	2	1
Butte.....		469.49	464.87	478.71		2	3
Charleston.....	348.60	668.74	679.34	699.39	101	5	3
Chicago.....	336.48	605.96	637.74	653.52	94	8	2
Cincinnati.....	338.26	608.77	626.39	645.31	91	6	3
Cleveland.....	354.01	634.80	676.58	686.52	94	8	1
Columbus.....		633.84	648.88	658.04		4	1
Dallas.....	395.41	702.55	716.30	750.58	90	7	5
Denver.....	247.36	440.51	452.35	463.47	87	5	2
Detroit.....	335.02	618.45	658.91	672.57	101	9	2
Fall River.....	375.51	680.86	697.84	713.78	90	5	2
Houston.....		680.96	695.74	721.18		6	4
Indianapolis.....	345.23	608.97	635.58	657.07	90	8	3
Jacksonville.....	377.10	672.38	682.08	694.52	84	3	2
Kansas City, Mo.....	340.12	618.23	647.28	658.29	94	6	2
Little Rock.....	390.14	694.09	716.01	735.88	89	6	3
Los Angeles.....	284.84	466.73	467.83	483.59	70	4	3
Louisville.....	363.85	674.06	687.50	687.24	89	2	(⁴)
Manchester.....	366.01	683.87	687.16	704.27	92	3	2
Memphis.....	368.46	684.91	718.04	744.70	102	9	4
Milwaukee.....	327.25	592.86	639.78	644.83	97	9	1
Minneapolis.....	319.98	560.73	614.70	624.79	95	11	2
Mobile.....		¹ 690.69	720.88	773.06		5	7
Newark.....	364.92	677.91	670.31	671.74	84	³ 1	(⁶)
New Haven.....	376.96	709.68	696.85	708.93	88	(⁴)	2
New Orleans.....	369.29	694.83	703.62	700.58	90	1	(⁴)
New York.....	355.36	661.59	665.95	692.03	95	5	4
Norfolk.....		680.48	688.19	700.49		3	2
Omaha.....	334.52	609.98	653.20	662.54	98	9	1
Peoria.....		592.73	632.97	636.07		7	(⁵)
Philadelphia.....	352.19	659.66	672.20	676.56	92	3	1
Pittsburgh.....	350.35	646.23	667.06	680.75	94	5	2
Portland, Me.....		680.02	679.22	704.38		4	4
Portland, Oreg.....	266.03	455.40	469.53	475.73	79	4	1
Providence.....	380.85	721.64	739.95	753.62	98	4	2
Richmond.....	346.40	664.03	684.19	694.63	101	5	2
Rochester.....		611.13	617.77	636.62		4	3
St. Louis.....	326.36	613.58	634.37	649.42	99	6	2
St. Paul.....		576.91	607.05	619.85		7	2
Salt Lake City.....	261.87	436.47	450.10	459.06	75	5	2
San Francisco.....	271.48	468.96	467.00	479.50	77	2	3
Scranton.....	335.98	632.23	650.96	663.21	92	5	2
Seattle.....	265.35	471.32	484.99	490.69	85	4	1
Springfield, Ill.....		611.90	648.79	658.06		8	1
Washington, D. C.....	354.82	699.66	708.01	711.22	100	2	(⁵)

¹ See footnote on p. 90.

² Cost of year's supply at prices charged in specified month.

³ Decrease.

⁴ Decrease of less than five-tenths of 1 per cent.

⁵ Increase of less than five-tenths of 1 per cent.

As may be seen in the table, the average family expenditure increased in November in all but 2 of the 50 cities. In New Orleans and Louisville, the decrease was less than five-tenths of 1 per cent. In Newark, Peoria, and Washington, the increase was less than five-tenths of 1 per cent. In 10 cities the expenditure increased 1 per cent, each; in 18 cities, 2 per cent, each; and in 10 cities, 3 per cent, each. In Birmingham, Memphis, Houston, New York, and Portland, Me., the increase was 4 per cent; in Dallas, 5 per cent; and in Mobile, 7 per cent. During the year period, from November, 1918, to November, 1919, Minneapolis showed the greatest increase, or 11 per cent. Three cities decreased as compared with a year ago, as follows: Baltimore, 2 per cent; Newark, 1 per cent; and New Haven, less than five-tenths of 1 per cent. As compared with the year 1913 the cities showing an increase of 100 per cent and over were as follows: Washington, 100 per cent; Richmond, Detroit, and Charleston, 101 per cent, each; Memphis, 102 per cent; and Birmingham, 104 per cent.

Index Numbers of Wholesale Prices in the United States.

WHOLESALE prices in the United States reached new high levels in November, the Bureau's weighted index number standing at 230 as compared with 223 for October, an increase of 3 per cent. Marked increases occurred in the groups of farm products, food, etc., cloths and clothing, and house-furnishing goods, the index numbers rising from 230 to 240, from 211 to 219, from 313 to 325, and from 264 to 299, respectively. Smaller increases were shown in the metals and metal products, lumber and building materials, and chemicals and drugs groups. On the other hand, the index number for fuel and lighting decreased from 181 to 179, while that for the miscellaneous group remained unchanged.

Among the important commodities whose wholesale prices averaged higher in November than in October were cotton, grains, alfalfa hay, cattle, tobacco, butter, cheese, coffee, eggs, salmon, rye and wheat flour, apples, corn meal, fresh beef, mutton, molasses, oleo-margarine, oleo oil, rice, tea, onions, potatoes, cotton and woolen goods, silk, anthracite coal, coke, crude and refined petroleum, iron and steel products, spelter, brick, pine lumber, turpentine, rosin, shingles, sulphuric acid, glycerin, alum, grain and wood alcohol, caustic soda, tableware, household furniture, bran, and cotton-seed meal. Timothy hay, hides, hogs, poultry, beans, buckwheat flour, lemons, oranges, prunes, lard, hams, lamb, veal, tallow, ingot copper, linseed oil, cottonseed oil, and jute were lower in November than in October, while sheep, canned goods, codfish, herring, mackerel,

raisins, glucose, milk, salt, sugar, vinegar, shoes, carpets, leather, gasoline, matches, plate and window glass, lime, cement, putty, paper, rope, rubber, soap, and wood pulp were practically unchanged in price.

Comparing prices in November, 1919, with those of a year ago, it is seen that the index number for farm products increased from 221 to 240, that for food articles from 206 to 219, and that for cloths and clothing from 256 to 325. During the same time the index number for fuel and lighting increased from 171 to 179, that for lumber and building materials from 164 to 236, and that for house-furnishing goods from 226 to 299. The index number for miscellaneous commodities, including such important articles as cotton-seed meal and oil, jute, malt, lubricating oil, newsprint paper, rubber, starch, soap, plug tobacco, and wood pulp increased from 203 to 220, while that for metals and metal products decreased from 188 to 164 and that for chemicals and drugs from 215 to 176 in the same period of time.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES, OCTOBER AND NOVEMBER, 1919, AND NOVEMBER, 1913 TO 1918, BY GROUPS OF COMMODITIES.

[1913=100.]

Group.	1919		November—					
	Oct.	Nov. ¹	1913	1914	1915	1916	1917	1918
Farm products.....	230	240	101	101	102	146	212	221
Food, etc.....	211	219	105	106	107	150	184	206
Cloths and clothing.....	313	325	100	96	105	146	198	256
Fuel and lighting.....	181	179	99	93	98	155	155	171
Metals and metal products.....	161	164	96	81	104	160	174	188
Lumber and building materials.....	231	236	98	95	94	104	134	164
Chemicals and drugs.....	174	176	100	105	142	155	240	215
House-furnishing goods.....	264	299	100	99	99	123	155	226
Miscellaneous.....	220	220	100	96	100	135	166	203
All commodities.....	223	230	101	98	103	144	183	206

¹ Preliminary.

Comparison of Retail Price Changes in the United States and Foreign Countries.

THE index numbers of retail prices published by several foreign countries have been brought together with those of this Bureau in the subjoined table after having been reduced to a common base, viz, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers compiled by the Bureau, because of the fact that in some instances satisfactory information for 1913 was not available. For Denmark, Great Britain, Norway, Sweden, and the city of Rome, Italy, the index numbers are reproduced as published in the original sources. With one exception all these are shown on the July, 1914, base in the source from which the information is

taken. The index numbers for Rome are based on the first half of 1914. The index numbers here shown for the remaining countries have been obtained by dividing the index for July, 1914, as published, into the index for each month specified in the table. As shown in the table, the number of articles included in the index numbers for the different countries differs widely. These results should not, therefore, be considered as closely comparable one with another. In one or two instances the figures here shown are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities included at successive dates.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND CERTAIN OTHER COUNTRIES.

[July, 1914=100.]

Year and month.	United States: 22 foodstuffs; 45 cities. Weighted.	Australia: 46 foodstuffs; 30 towns. Weighted.	Canada: 29 foodstuffs; 60 cities. Weighted.	Denmark: Family food budget; 5 persons. Weighted.	France: Family budget, 13 articles.	
					Cities over 10,000 popu- lation (except Paris). Weighted.	Paris only. Weighted.
1914.						
July.....	100	100	100	100	100	100
October.....	103	99	108			
1915.						
January.....	101	107	107		110	120
April.....	97	113	105			114
July.....	98	131	105	128	123	120
October.....	101	133	105			118
1916.						
January.....	105	129	112		133	134
April.....	107	131	112		137	132
July.....	109	130	114	146	141	129
October.....	119	125	125		145	135
1917.						
January.....	125	125	138		174	130
February.....	130	126	141	138		
March.....	130	126	144			
April.....	142	127	145		171	147
May.....	148	127	150			
June.....	149	127	160			
July.....	143	126	157	163	184	183
August.....	146	129	157			
September.....	150	129	157			
October.....	154	129	159		200	184
November.....	152	129	168			
December.....	154	128	165			
1918.						
January.....	157	129	167		211	191
February.....	158	130	169	173		
March.....	151	131	170			
April.....	151	131	169		202	208
May.....	155	132	171			
June.....	159	132	172			
July.....	164	131	175	187	214	206
August.....	168	128	181			
September.....	175	128	179			
October.....	177	131	182		260	238
November.....	179	133	182			
December.....	183	134	184			
1919.						
January.....	181	140	186	186	277	248
February.....	169	141	181			227
March.....	172	143	173			248
April.....	178	145	180		293	257
May.....	181	146	183			268
June.....	180	147	185			264
July.....	186	147	186	212	288	281
August.....	188	148	185			238
September.....	184		183			259

¹Quarter beginning that month.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND CERTAIN OTHER COUNTRIES—Concluded.

[July, 1914=100.]

Year and month.	Great Britain: 21 foodstuffs; 600 towns. Weighted.	Italy.		New Zealand: 59 foodstuffs; 25 towns. Weighted.	Norway: Family food budget. Weighted.	Sweden: 21 articles; 41 towns. Weighted.
		7 foodstuffs; 40 cities (variable). Not weighted.	Rome: Family food budget; 5 persons. Weighted.			
1914.						
July.....	100	100	¹ 100	100	100	100
October.....	112	104	.....	102	.....	² 107
1915.						
January.....	118	108	95	111	.....	² 113
April.....	124	113	107	113	.....	² 121
July.....	132 ³	120	95	112	.....	² 124
October.....	140	127	100	112	.....	² 128
1916.						
January.....	145	133	111	116	.....	² 130
April.....	149	132	116	118	.....	² 134
July.....	161	132	111	119	³ 160	² 142
October.....	168	132	111	120	.....	² 152
1917.						
January.....	187	144	124	127	.....	160
February.....	189	154	127	126	.....	166
March.....	192	161	121	126	.....	170
April.....	194	164	120	127	.....	175
May.....	198	167	123	128	.....	175
June.....	202	171	136	128	.....	175
July.....	204	172	137	127	.....	177
August.....	202	178	143	127	214	181
September.....	206	188	142	129	.....	187
October.....	197	.....	148	130	.....	192
November.....	206	197	166	130	.....	200
December.....	205	199	157	132	.....	212
1918.						
January.....	206	191	177	133	.....	221
February.....	208	221	181	134	.....	227
March.....	207	247	199	134	.....	235
April.....	206	236	200	137	.....	247
May.....	207	.....	202	139	.....	258
June.....	208	239	199	139	.....	261
July.....	210	253	203	139	279	268
August.....	218	.....	208	141	.....	280
September.....	216	267	219	141	.....	284
October.....	229	.....	235	142	.....	310
November.....	233	.....	249	144	275	320
December.....	229	.....	254	150	275	330
1919.						
January.....	230	.....	259	145	279	339
February.....	230	.....	258	142	278	334
March.....	220	.....	243	141	278	331
April.....	213	281	230	142	276	337
May.....	207	.....	232	142	271	328
June.....	204	.....	225	143	269	319
July.....	209	.....	206	144	269	310
August.....	217	.....	207	148	.....	.....
September.....	216	.....	214	148	.....	.....

¹ January-July.² Quarter beginning that month.³ August.

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase in the cost of food and general family expenditure for January to December, 1919, over July, 1914. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or

frozen; bacon, fish, flour, bread, tea, sugar, milk; butter, fresh and salt; cheese, margarine, eggs, and potatoes.

The table gives percentages of increase, and is not one of relative prices, as is the table given for the United States. When making comparisons this should be borne in mind, and to obtain the relative price it is necessary to add 100 to the percentage as given, i. e., January, 1919, the increase is 130, the relative price being 230.

The figures represent two comparisons:¹ First, the increase in price based on the same quantities as used in July, 1914; second, the increase in the cost of living, based on the change in the quality of the standard of living. In other words, the increase in column one of the table shows what the wage earner paid for the same quantities of food, while the figures in column two give the change that results from a substitution of one kind of food for another to meet wartime conditions.

The same method is used in family expenditures, the third column showing percentage of increase of all articles and the last column giving approximate figures, based on the increase in cost of all other articles and the estimated changed consumption of food.

PER CENT OF INCREASE IN FOOD AND ALL ITEMS IN GREAT BRITAIN, NOVEMBER, 1914, 1915, 1916, 1917, AND 1918, AND JANUARY TO DECEMBER, 1919, AS COMPARED WITH JULY, 1914.

[Compiled from the British Labour Gazette.]

Year and month.	Food.		All items in family budget.	
	Retail prices (assuming same quantities).	Expenditures (allowing for estimated changes in consumption).	Retail prices (assuming same quantities).	Expenditures (allowing for estimated changes in consumption).
December, 1914.....	100			
December, 1915.....	44			
December, 1916.....	284			
December, 1917.....	145	51	43.5	
December, 1918.....	129	90	120	95
1919.				
January.....	130	79	120	90
February.....	130	77	120	90-95
March.....	120	79	115	90
April.....	113	87	110	95
May.....	107	81	105	90
June.....	104	87	105	95
July.....	109	97	105-110	100
August.....	117	108	115	110
September.....	116	103	115	105
October.....	122	113	120	110-115
November.....	131	119	125	115-120
December.....	134	116	125	110-115

¹ For a more complete explanation, see article by Prof. W. F. Ogburn, pp. 169 and 170 in the MONTHLY LABOR REVIEW for May, 1919.

² Including tax on sugar and tea.

³ Not including taxes.

⁴ Including taxes.

⁵ The increase, excluding additional taxation, is 7 per cent less.

⁶ The increase, excluding additional taxation, is 6 per cent less.

Changes in Cost of Living in the United States, 1913, to October, 1919.

THE following table is an estimate, made by the Bureau of Labor Statistics, of the average increase in the cost of living in the United States since 1913. The Bureau has not complete retail price data back to 1913 and it has taken the average increase in the prices of the different groups of items for a number of industrial centers for the period from December, 1914, to June, 1919. While it is not held that the prices in these industrial centers necessarily agree with prices in every section of the country, yet the experience of the Bureau goes to show that the *changes* in prices in the industrial centers used are fairly representative of changes in the country generally except as to rents.

From data relating to food prices and to the *wholesale* prices of other groups of commodities, the changes from 1913 to December, 1914, and from June, 1919, to October, 1919, have been computed and the increases for these periods added to those from December, 1914, to June, 1919. The final results are shown in the table.

Rents are a purely local matter and changes in rents in a given locality can be obtained only by a special study in that locality. However, the percentage of increase in rents as well as in the other groups of items in the industrial centers mentioned have been applied to the increase shown in this table.

The first column in the table shows the average per cent of total expenditure that is devoted to the different groups of items—food, clothing, etc. This per cent is based on figures obtained from over 12,000 families in 92 localities, in a careful survey of the cost of living recently made by the Bureau. The second column shows the average per cent of increase in the prices of the several groups from 1913, to October, 1919. The third column is the product of the first and second columns and shows the per cent of increase applied to the total family budget. To illustrate: 38.2 per cent of the total expenditure goes for food; food costs have increased 80.7 per cent; this makes the per cent of increase in the price of food, as related to the total family expenditure, 30.8 per cent.

ESTIMATED PER CENT OF INCREASE IN COST OF LIVING IN THE UNITED STATES FROM 1913 TO OCTOBER, 1919.

Items of expenditure.	Per cent of total expenditure.	Average per cent of increase in prices from 1913 to October, 1919.	Per cent of increase as applied to family budget.
Food.....	38.2	80.70	30.8
Clothing.....	16.6	139.30	23.1
Housing.....	13.4	17.75	2.4
Fuel and light.....	5.3	45.07	2.4
Furniture and furnishings.....	5.1	139.62	7.1
Miscellaneous.....	21.3	81.31	17.3
Total.....			83.1

Changes in Cost of Living in the District of Columbia.

PRICES recently secured by the Bureau of Labor Statistics show that the cost of living in the District of Columbia increased 88.4 per cent from 1913 to November, 1919. The increase from April, 1919, to November, was 8.0 per cent. For the longer period named, the changes in the several groups of items entering into the family budget ranged from 3.4 per cent for housing to 156.7 per cent for furniture and furnishings.

The following table shows the per cent that the average expenditure for each group of items is of the average total expenditure per family, and the per cent of change in prices for each group and for all items from 1913 to December of each year from 1914 to 1918, inclusive, and to April and November, 1919. It also shows the increases from April to November, 1919. The latter figure, 8.0, does not agree with the per cent that would be derived from a computation based on the figures shown for April and November, respectively. The explanation of this is that the column showing the increase from April to November is based on the prices of comparable articles at these two dates. Articles that were not on sale at *both* dates were not used. On the other hand, the figures comparing November, 1919, with December, 1914, have been derived by comparing November, 1919, prices with December, 1918, prices, without reference to April prices, so that a direct comparison between the two columns, April 1919, and November, 1919, should not be made.

CHANGES IN COST OF LIVING IN WASHINGTON, D. C., FROM 1913 TO NOVEMBER, 1919.

Items of expenditure.	Per cent of total expenditure.	Per cent of increase from 1913 to—							Per cent of increase from April, 1919, to November, 1919.
		December—					April, 1919.	November, 1919.	
		1914	1915	1916	1917	1918			
Food.....	38.2	3.7	4.3	19.9	67.0	97.9	91.5	100.4	4.7
Clothing.....	16.6	¹ 4.0	¹ 4	18.3	53.7	104.1	101.1	155.3	22.6
Housing.....	13.4	(²)	¹ 1.5	¹ 3.7	¹ 3.4	¹ 1.5	¹ 1.4	3.4	4.1
Fuel and light.....	5.3	3.0	3.0	10.5	28.6	45.1	46.1	47.1	3.4
Furniture and furnishings.....	5.1	¹ 1.0	5.2	29.2	70.4	125.1	123.7	156.7	14.0
Miscellaneous.....	21.3	(²)	.4	15.3	44.3	55.9	57.4	62.7	4.9
Total.....		.9	1.9	15.4	48.6	75.2	72.5	88.4	8.0

¹ Decrease.² No change.

Production, Cold-Storage Holdings, and Wholesale and Retail Prices of Butter and Cheese.

By ELMA B. CARR.

THE preservation of food from seasons of greatest production to seasons of scarcity should tend to make prices more uniform throughout the year. It not only takes care of an over-supply, preventing waste, but it provides a supply in seasons when certain foods, in the fresh state, could be had only in small quantities, if at all.

In this article an attempt is made to show the relation between the amount of butter and cheese in cold storage, the amount produced, and the trend in wholesale and retail prices.

The wholesale prices shown are those compiled each month by this Bureau from weekly quotations published in the Chicago Dairy Produce. The retail prices are averages computed from reports sent to this Bureau each month by retail dealers in Chicago.

Figures showing production and cold-storage holdings have been taken from monthly statements of the Bureau of Markets of the Department of Agriculture. Figures giving production prior to 1918 are not available. Figures showing cold-storage holdings represent the amounts held in cold-storage warehouses on the first of each month. Figures showing receipts, or the movement into storage, and deliveries, or the movement out of storage, are not available prior to September, 1919. Although prior to this date it is not known just how much butter was received or delivered by cold-storage warehouses during each month, the difference between the holdings on the first of any month and the holdings on the first of the following month does represent the net amount stored or withdrawn from storage during the month.

Figures showing exports and imports are taken from monthly statements of the Bureau of Foreign and Domestic Commerce of the Department of Commerce.

By adding to the total production for each month, the amount held in storage and the amount imported, and subtracting the amount exported and the amount held in storage on the first of the next month, the amount available for consumption during each month has been computed.

Creamery Butter.

The storage season for butter may be said to begin in May and end in April. Storage holdings are increased during May, June, July, and August, and hence these months are known as "storing months." Storage holdings are decreased during the months from September to April, inclusive. These months are known as "distributing months." September is sometimes a storing month if the season is late. The largest amount held in storage on the first of any month during a season is known as the "peak load" for the season. As shown in Table 1, about three-fourths of the peak load is stored during June and July; most of the distribution is within the months of October to March, inclusive. About one-fourth of the peak load is usually withdrawn during December. Table 1 shows, also, the percentage of the peak load that was on hand from the previous season and the percentage that was carried over into the following season.

TABLE 1.—MONTHLY PER CENT OF INCREASE OR DECREASE IN STORAGE HOLDINGS OF CREAMERY BUTTER, BASED ON THE PEAK LOAD FOR EACH PERIOD, MAY, 1907, TO APRIL, 1919.

Period (May-April).	Per cent on hand May 1.	Per cent of increase.				Per cent of decrease.								Per cent on hand at end of period.
		May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1907-1916 ¹	6.9	3.7	43.8	33.8	11.8	0.2	13.0	15.0	24.6	16.1	12.4	8.7	3.1	6.9
1916-17 ²	1.1	5.6	45.4	44.7	3.2	8.9	10.4	22.5	14.4	14.8	13.8	9.2	3.4	2.6
1917-18 ²	2.5	5.9	36.5	36.3	13.5	² 5.3	6.0	21.3	28.5	19.2	7.3	3.9	4.0	9.8
1918-19 ²	10.2	2.7	36.0	38.8	12.3	11.7	6.9	16.6	20.3	7.8	12.4	12.1	2.6	9.5

¹ Figures taken from Bulletin No. 776 of the Bureau of Markets, Department of Agriculture.

² Computed from monthly reports of the Bureau of Markets.

³ Per cent of increase.

The 1919-20 season will not be completed until May 1, 1920, but figures are given in Table 2 which show the amount of creamery butter produced each month since January, 1918, the total cold-storage holdings on the first of each month, and the monthly net increase or decrease in storage holdings since August, 1916. Table 2 shows, also, the amount of butter exported, imported, available for consumption, and wholesale and retail prices in Chicago each month since August, 1916.

The relation between the amount of butter produced, the amount in storage, the amount available for consumption, and wholesale prices is shown also in the chart on page 103 for each month, January, 1918, to June, 1919. Later figures are not shown because no further information is available for production. For the same reason, figures prior to January, 1918, were not charted. The production figures given in Table 2 for July, August, and September are only pre-

liminary and are subject to change. The information as shown in the chart, however, covers an entire storage season.

TABLE 2.—PRODUCTION, STORAGE HOLDINGS, EXPORTS, IMPORTS, AMOUNT AVAILABLE FOR CONSUMPTION, AND WHOLESALE AND RETAIL PRICES OF CREAMERY BUTTER, BY MONTHS, AUGUST, 1916, TO SEPTEMBER, 1919.

Year and month.	Number of pounds produced. ¹	Number of pounds in storage. ²	Net increase (+) or decrease (−) in storage (pounds). ³	Number of pounds exported. ³	Number of pounds imported. ³	Number of pounds available for consumption. ⁴	Average price per pound in Chicago.	
							Whole-sale ⁵ (cents).	Retail ⁶ (cents).
1916.								
August.....		94,518,871	+10,445,607	2,429,200	5,784		37.0	34.4
September.....		104,904,478	−9,323,704	4,779,279	33,336		32.3	37.2
October.....		95,640,774	−10,899,592	8,065,203	23,740		34.5	39.4
November.....		84,741,182	−23,582,451	4,580,020	48,878		36.8	42.4
December.....		61,158,731	−15,162,217	2,298,548	32,725		38.3	43.6
1917.								
January.....		45,996,514	−15,542,314	1,888,825	20,789		38.0	43.8
February.....		30,454,200	−14,521,780	296,062	16,709		40.7	46.6
March.....		15,982,420	−9,435,596	487,396	10,291		40.0	44.5
April.....		6,286,854	−3,595,569	343,519	167,558		42.3	45.4
May.....		2,701,285	+6,309,584	569,283	25,937		39.0	43.1
June.....		9,010,869	+38,835,645	679,362	76,634		38.2	43.4
July.....		47,846,514	+38,636,153	266,852	192,795		37.6	43.2
August.....		86,482,667	+14,356,610	348,808	74,591		40.0	44.8
September.....		100,839,277	+5,636,483	429,264	52,464		42.5	48.4
October.....		106,475,760	+6,361,000	275,017	14,795		43.1	48.7
November.....		100,114,760	−22,616,209	262,800	463,424		41.2	49.2
December.....		77,468,551	−30,398,605	1,345,740	191,763		48.1	53.0
1918.								
January.....	44,357,118	47,069,946	−20,452,025	4,195,551	747,154	61,360,746	48.6	54.4
February.....	42,389,031	26,617,921	−7,809,618	821,421	29,617	49,406,845	48.9	54.7
March.....	49,086,028	18,808,303	−4,201,286	4,309,478	6,274	48,983,110	44.3	50.6
April.....	57,331,653	14,607,017	−4,214,040	3,636,006	20,188	57,929,875	41.5	46.0
May.....	85,563,665	10,392,977	+2,724,887	1,266,918	2,251	81,574,111	42.0	47.5
June.....	104,385,066	13,117,864	+39,599,338	578,111	11,609	67,219,224	42.0	46.8
July.....	97,440,132	49,717,262	+39,457,781	320,323	1,439	57,663,517	43.2	48.0
August.....	85,148,447	89,174,963	+12,518,377	337,158	26,703	72,319,585	44.3	49.0
September.....	72,396,845	101,193,310	−11,879,682	631,739	503,815	84,153,603	53.7	57.5
October.....	63,889,623	89,813,628	−7,018,236	2,186,346	192,856	68,911,369	55.4	61.5
November.....	45,741,353	82,795,392	−16,885,652	4,677,742	78,933	58,028,396	61.0	65.3
December.....	45,660,340	65,909,540	−20,691,179	3,293,902	30,628	63,048,155	67.0	72.7
1919.								
January.....	52,189,198	45,218,361	−7,959,663	4,452,371	644,252	56,340,742	61.8	71.3
February.....	44,342,568	37,258,698	−12,634,662	3,726,840	363,761	53,614,151	49.3	53.5
March.....	54,822,396	24,624,036	−12,343,564	4,127,635	661,980	63,700,305	60.2	63.9
April.....	67,487,317	12,280,472	−2,621,544	8,475,366	219,932	61,853,427	61.5	67.1
May.....	103,941,021	9,658,928	+19,775,854	759,803	893,245	84,298,609	55.6	62.4
June.....	118,357,492	29,434,782	+60,723,321	810,763	508,925	58,332,334	51.3	57.5
July.....	78,921,650	90,158,103	+33,387,667	633,764	654,887	54,555,206	51.2	57.1
August.....	72,739,399	123,545,670	+7,842,744	2,395,139	961,718	763,473,234	53.3	58.4
September.....	57,877,563	131,388,414	−9,572,255	1,387,148	496,442	766,569,112	56.9	60.3
October.....	(8)	121,816,159	−21,342,086	2,918,389	2,123,393	(8)	64.6	67.8
November.....	(8)	100,474,073	−20,797,840	1,108,896	1,553,263	(8)	68.6	73.6
December.....	(8)	73,676,233	(8)	(8)	(8)	(8)	68.1	74.4

¹ Figures from Bureau of Markets, Department of Agriculture. Figures showing production prior to 1918 not available.

² Number of pounds in storage on the first of each month. Figures from Bureau of Markets.

³ During the month. Export figures do not include any amount sent in Army transports. Only the amount sent in merchant vessels is included.

⁴ The amount available for consumption equals total production, plus storage at beginning of month, plus imports, minus exports, minus storage at end of month.

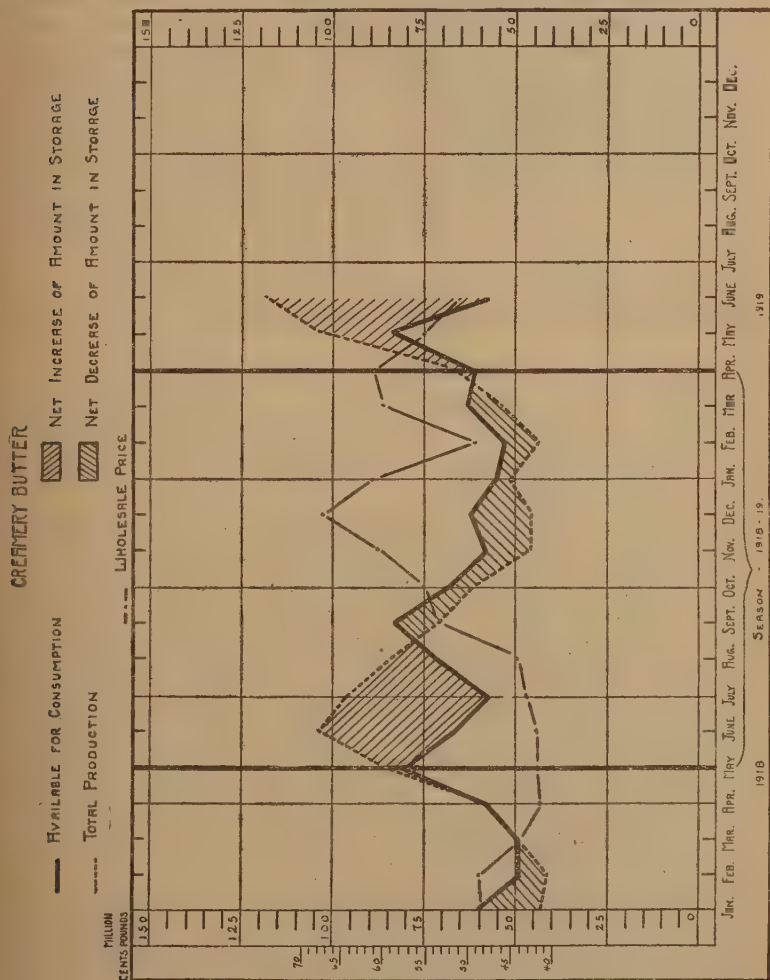
⁵ The wholesale prices shown are those compiled each month by the Bureau of Labor Statistics from weekly quotations published in the Chicago Dairy Produce.

⁶ The retail prices are averages computed from reports sent to the Bureau of Labor Statistics each month by retail dealers in Chicago.

⁷ From preliminary reports of Bureau of Markets, Department of Agriculture, and subject to change.

⁸ Information not yet available.

On May 1, 1917, at the beginning of the 1917-18 season, there were a little over 2½ million pounds in storage. During the months from May to October storage holdings showed a net increase of a little



over 103½ million pounds. The average wholesale price for these months was 39.5 cents. During June and July the net amount stored was almost 77½ million pounds. The average wholesale price for these two months was 37.9 cents. From October 1 to May 1, 1918, there

was a net withdrawal from storage of 96 million pounds. The average wholesale price during these months was 45.5 cents. In December there was a net decrease in storage holdings of 30 million pounds. The average wholesale price in December was 48.1 cents. During the storing months of this season, exports of butter totaled a little over 2 million pounds and imports about 419 thousand pounds. During the distributing months, exports totaled over 14½ million pounds and imports almost 1½ million.

By proclamation of July 9, 1917, the export of butter was prohibited except by virtue of a special license. Butter was included in the presidential license proclamations of October 8, 1917, and January 10, 1918. Butter was in the list of restricted imports, April 22, 1918.¹

During the period from May, 1917, to April, 1918, the average differential between wholesale and retail prices was 5 cents.

Storage Season 1918-19.

On May 1, 1918, at the beginning of the 1918-19 season, there were a little over 10 million pounds in storage. During the months from May until September, storage holdings showed a net increase of slightly over 91 million pounds.

The total production from May until September was 372½ million pounds. The average wholesale price for these months was 42.9 cents. During June and July the net increase in storage holdings was 76 million pounds. The total production for these two months was approximately 202 million pounds. The average wholesale price for these two months was 42.6 cents. The movement into storage of such a large proportion of the amount produced no doubt prevented a glutted market and a consequent decline in price. From September until May, 1919, there was a net withdrawal from storage of 92 million pounds. The average wholesale price for these months was 58.7 cents. During December there was a net withdrawal of a little more than 20½ million pounds. The average wholesale price in December was 67 cents.

Creamery butter was included in the export conservation list of May 17, 1918.¹ During the storing months, from May to September, exports totaled 2½ million pounds and imports 40 thousand pounds. During the months of distribution, September to May, 1919, exports totaled 31½ million pounds and imports 2½ million.

On August 28, 1918, there was commandeered for the use of the Army, Navy, and Allies, between 25 and 30 million pounds of cream-

¹ War Industries Board, Bulletin No. 21, p. 16.

ery butter. The wholesale price for September showed an increase of 10 cents per pound and the retail price an increase of 9 cents, as compared with prices in August.

In October there was the largest amount exported since May. Production decreased approximately 8 million pounds; there was a net withdrawal from storage of 7 million pounds; the wholesale price advanced 1 cent. In November, 1918, the wholesale price increased 6 cents per pound and the retail price, 4 cents. Production was 18 million pounds less than in October, but there was a net decrease of almost 17 million pounds in storage holdings. Over 4½ million pounds were exported.

In December the wholesale price advanced another 6 cents, and the retail price 7 cents, although production was practically the same as in November, and there was a net decrease of 20 million pounds in the amount in storage. During December, however, 3 million pounds were exported.

The wholesale price for January, 1919, was 62 cents; for February, 49 cents; and for March, 60 cents. The amount produced in February was almost 7 million pounds less than in January. During February, however, there was a net decrease in cold storage holdings of 12½ million pounds, which was greater by 5 millions than the net decrease during January. The Creamery Journal,¹ in commenting on the drop in prices in February and the advance in March, states that in addition to an unusually heavy production in midwinter, which swamped the market and made selling difficult, the Government returned butter which was commandeered but which was said not to be up to quality. It further states that in March the Food Administration decided to take the commandeered butter, and much of it went to England, and that this, together with the fact that consumption increased in March, caused the market to advance. The Purchase, Storage, and Traffic Division, Quartermaster Corps, of the War Department has stated that when shipment overseas was suspended there was a surplus of some 5 million pounds of canned and commercial butter, which was then in storage. About 1½ million pounds of this was turned back to the manufacturers from whom it was bought and the balance was sold to dealers, and while some may have been exported by the dealers or manufacturers, and concerning which they would have no records, a great deal of it probably was retained in this country.

The wholesale price in April was 62 cents. During this month, storage holdings showed a net decrease of 2 million pounds, but over 8 million pounds were exported.

¹ Feb. 15, 1919.

During the season 1918-19, the average differential between the wholesale and retail price was 5 cents, approximately the same as for the 1917-18 season.

Storage Season 1919-20.

As previously stated, the 1919-20 season will not be completed until May 1, 1920, but as much information as is available at this time is given in Table 2. On May 1, 1919, at the beginning of the season, there were approximately 9½ million pounds in storage. During May, June, and July, 1919, production increased. From May until August there was a great decrease in the amount exported. Prices declined, but not so much as they probably would have done had these not been the months when the greatest amounts are put into storage.

Figures showing receipts, or the movement into storage, and deliveries, or the movement out of storage, are shown in the following statement for September, October, and November, 1919:

	Receipts.	Deliveries.
September.....	12, 520, 318	21, 908, 798
October.....	12, 885, 354	33, 892, 164
November.....	10, 141, 492	36, 558, 305

A noticeable feature in October and November is the large amount of butter imported. Of the total amount of 2,123,298 pounds imported in October, 2,118,151 pounds came from Canada. The next largest amount imported, 5,181 pounds, came from Denmark. In November, out of a total of 1,553,263 pounds imported, 1,539,792 pounds came from Canada and 13,471 pounds from Denmark.

The amount of butter exported during these two months was much less than during the same months of the previous year. In November, 1919, the amount imported was 344,367 pounds more than the amount exported.

The wholesale price in November was about 8 cents higher and the retail price about 9 cents higher than in November, 1918.

In December, 1919, the wholesale price was only 1 cent higher and the retail price only 2 cents higher than in December, 1918.

Table 3 shows comparisons over two storage seasons, May, 1917, to April, 1918, and May, 1918, to April, 1919. Table 4 gives information for the first six months of 1918 and 1919 similar to that given in Table 3, by seasons.

TABLE 3.—COMPARISON OF PRODUCTION, STORAGE HOLDINGS, EXPORTS, IMPORTS, AMOUNT OF CREAMERY BUTTER AVAILABLE FOR CONSUMPTION, BY SEASONS, MAY, 1917, TO APRIL, 1918, AND MAY, 1918, TO APRIL, 1919.

Item.	May, 1917, to April, 1918.	May, 1918, to April, 1919.
	<i>Pounds.</i>	<i>Pounds.</i>
In storage at beginning of season.....	2,701,285	10,392,977
Produced during season.....	(1)	818,966,950
Imported during season.....	1,894,636	2,743,159
Total.....	(1)	832,103,086
Exported during season.....	17,139,582	34,014,571
In storage at end of season.....	10,392,977	9,658,923
Total.....	27,532,559	43,673,499
Available for consumption.....	(1)	788,429,587

¹ Information not available.

TABLE 4.—COMPARISON OF PRODUCTION, STORAGE HOLDINGS, EXPORTS, IMPORTS, AMOUNT AVAILABLE FOR CONSUMPTION, AND AVERAGE WHOLESALE AND RETAIL PRICES OF CREAMERY BUTTER FOR THE FIRST SIX MONTHS OF EACH YEAR, 1918 AND 1919.

Item.	First six months of—	
	1918	1919
	<i>Pounds.</i>	<i>Pounds.</i>
Total production.....	383,112,561	442,139,993
Average monthly storage holdings.....	21,769,004	26,412,546
Net amount of previous season's storage holdings marketed.....	36,676,969	35,559,433
Net amount placed in cold storage for current season.....	39,324,225	80,499,175
Total exports.....	14,807,485	22,352,778
Total imports.....	816,093	3,292,095
Total amount available for consumption.....	366,473,913	378,139,568
	<i>Cents.</i>	<i>Cents.</i>
Average wholesale price.....	44.6	56.6
Average retail price.....	50.0	62.6

The following table shows the per cent of the total stocks of butter held by creameries, retail dealers, wholesale dealers, meat packers, cold-storage houses, and by miscellaneous dealers. This information, published in Food Surveys of the Department of Agriculture, is available for January and July, 1918, and for January, 1919. The information was secured and the paper published as a war-time emergency, and was discontinued after July 1, 1919. The table is given here to show that the proportion of the total commercial stocks held by the different groups was fairly constant, with the exception of that held by meat packers, which, in January, 1919, was more than double the proportion held by this group in January, 1918.

TABLE 5.—PER CENT OF TOTAL STOCKS OF CREAMERY BUTTER HELD BY CREAMERIES, COLD STORAGE WAREHOUSES, WHOLESALE DEALERS, RETAIL DEALERS, AND BY MISCELLANEOUS DEALERS, JANUARY AND JULY, 1918, AND JANUARY, 1919.

[From Food Surveys, June and August, 1918, and February and March, 1919, published by Bureau of Markets, Department of Agriculture.]

Group.	Total stocks.			Percentage of total stocks ¹ held by each group.		
	1918		1919	1918		1919
	January.	July.	January.	January.	July.	January.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Total, all groups.....	183,686,073	176,143,419	162,028,916	100.0	100.0	100.0
Creameries.....	11,017,614	13,526,964	8,717,972	13.2	17.8	14.1
Cold storages.....	44,538,589	38,558,001	32,937,707	53.2	50.6	53.1
Wholesale dealers.....	23,168,122	22,084,232	19,080,323	27.7	29.0	30.8
Wholesale dealers in butter, eggs, and cheese.....	14,088,714	13,630,918	8,608,502	16.8	17.9	13.9
Meat packers.....	5,058,679	5,895,423	9,189,417	6.0	7.7	14.8
Other wholesale dealers.....	4,020,729	2,557,891	1,282,404	4.8	3.4	2.1
Retail dealers.....	10,082,845	6,026,056	(²)			
Miscellaneous.....	4,961,748	1,974,222	1,292,914	5.9	2.6	2.0
Bakers.....	(³)	505,988	501,947		.7	.8
Oleomargarine manufacturers.....	(³)	370,196	56,268		.5	.1
Cheese factories.....	(³)	295,905	61,222		.4	.1
Other miscellaneous.....	(³)	802,133	673,477		1.1	1.1

¹ Not including retail stocks.

² Retail stocks not secured by Bureau of Markets.

³ Detailed information not available.

American Cheese.

The storage season for cheese is not so clearly defined as that for butter. It may be said to begin either in May or June and end in April or May. In this article the storage season has been taken as beginning in May, although in both May, 1917, and May, 1918, over 2 million pounds net were withdrawn from storage.

An exceptionally large quantity of American cheese was placed in cold storage during the 1917-18 season. At the beginning of the season there were approximately 7½ million pounds in storage. This was reduced during May by a net withdrawal of almost 3 million pounds. There was an increase each month from June to October in the amount in storage. On October 1 there were 92 million pounds in storage. This amount represents the peak load of the season. From this date until the end of the season the net withdrawal from storage was almost 68 million pounds. The average wholesale price during the months when more cheese was being stored than was being withdrawn was 22 cents and during the months when more was being put upon the market than was being stored was 23 cents.

On May 1, 1918, at the beginning of the 1918-19 season, there were 24½ million pounds in storage. A net withdrawal of 2 million

pounds was made during the month of May. During June, July, and August almost 111 million pounds were produced. During these months a net amount of 34 million pounds was stored. The average wholesale price during these months was 23 cents. In September there was a reduction of approximately 4½ million pounds in production and, although there was a net withdrawal of 14½ million pounds from storage, the price advanced to 28 cents. December shows the lowest production, with a net release from storage of 5½ million pounds. The price in December was 35 cents. In February, 1919, the price dropped 10 cents per pound, gradually rising to 30 cents in May.

On May 1, 1919, at the beginning of the 1919-20 season, there were only 6½ million pounds in storage warehouses. To this sum was added a net increase of 70 million pounds during May, June, July, and August. A net sum of 50 million pounds of this amount was put in during June and July. The average wholesale price for these months was 31 cents. The July price was the highest since January, when the price was 36 cents.

The passage of cheese through trade channels is more difficult to follow than that of butter, but the following tables and the chart are given in order to show as nearly as it is possible to show it what influence factors affecting the supply have upon the trend in prices.

TABLE 6.—MONTHLY PER CENT OF INCREASE OR DECREASE IN STORAGE HOLDINGS OF AMERICAN CHEESE, BASED ON THE PEAK LOAD FOR EACH SEASON, MAY, 1907, TO APRIL, 1919.

Season (May-April.)	Per cent on hand May 1.	Per cent of increase.				Per cent of decrease.								Per cent on hand at end of season.
		May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	
1916-17 ¹	17.1	2.9	27.2	40.5	12.3	5.3	7.2	8.5	11.1	23.0	15.9	10.5	3.1	15.4
1917-18 ¹	9.6	22.6	26.3	37.9	23.1	3.5	6.5	7.0	9.4	14.9	12.0	9.6	14.7	25.9
1918-19 ⁴	43.1	23.5	19.1	30.4	1.1	25.6	14.4	13.6	9.8	8.3	10.1	5.5	1.0	11.6

¹ Figures taken from Bulletin No. 776 of the Bureau of Markets, Department of Agriculture.

² Per cent of decrease.

³ Per cent of increase.

⁴ Computed from monthly reports of the Bureau of Markets.

AMERICAN CHEESE

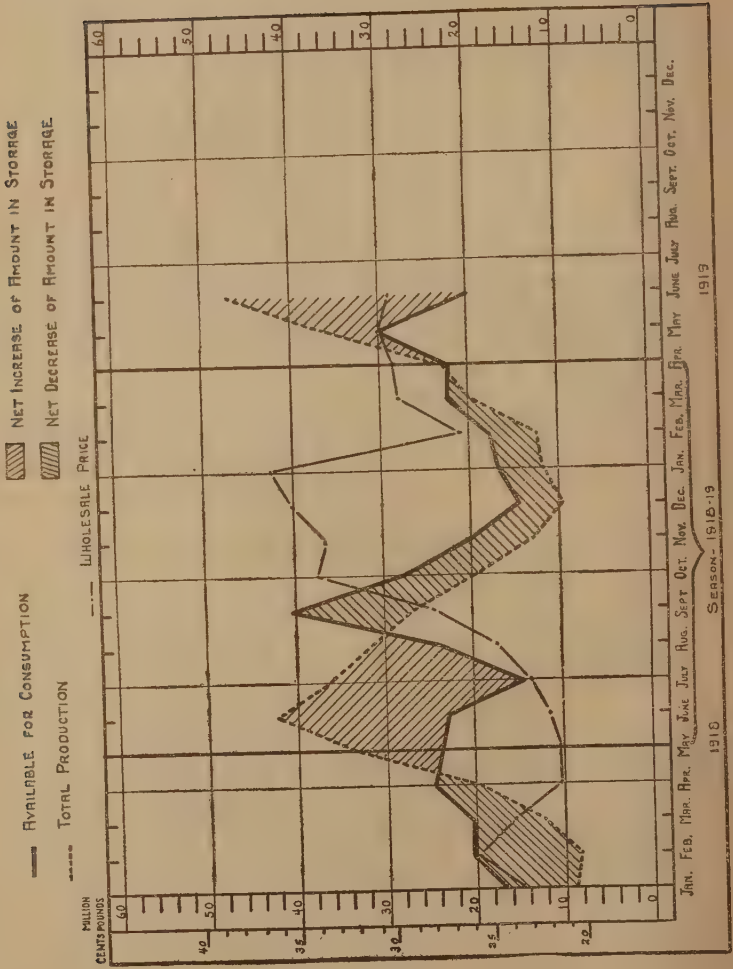


TABLE 7.—PRODUCTION, STORAGE HOLDINGS, EXPORTS, IMPORTS, AMOUNT AVAILABLE FOR CONSUMPTION, AND WHOLESALE AND RETAIL PRICES OF AMERICAN CHEESE, BY MONTHS, SEPTEMBER, 1916, TO SEPTEMBER, 1919.

Year and month.	Number of pounds produced. ¹	Number of pounds in storage. ²	Net increase (+) or decrease (−) in storage (pounds). ³	Number of pounds exported. ³	Number of pounds imported. ³	Number of pounds available for consumption. ⁴	Average price per pound in Chicago.	
							Whole-sale. ⁵	Retail. ⁶
							Cents.	Cents.
1916.								
September.....		36,413,591	— 1,218,162	3,303,404	2,826,220	.....	18.1	26.6
October.....		35,195,399	+ 5,239,125	5,970,313	2,540,315	.....	18.9	27.7
November.....		40,434,524	+ 5,724,076	3,644,915	1,113,006	.....	23.3	29.6
December.....		34,710,448	— 2,855,469	4,036,169	662,207	.....	23.0	32.9
1917.								
January.....		31,854,979	— 11,439,543	8,101,103	376,650	.....	21.8	32.1
February.....		20,415,436	— 6,574,635	7,241,648	273,103	.....	21.5	32.9
March.....		13,840,801	— 4,884,517	7,577,082	278,412	.....	23.9	31.8
April.....		8,950,284	— 1,433,069	5,283,007	497,888	.....	23.1	32.7
May.....		7,518,215	— 2,949,426	7,109,161	505,387	.....	23.8	33.4
June.....		4,568,789	+ 27,365,164	10,901,054	1,128,515	.....	22.4	33.6
July.....		31,933,953	+ 30,483,840	2,236,144	1,138,165	.....	21.1	33.9
August.....		62,417,293	+ 19,557,438	366,222	507,868	.....	21.3	34.2
September.....		81,974,731	+ 10,475,265	2,006,683	293,002	.....	23.9	34.4
October.....		92,449,996	— 7,210,815	464,967	274,066	.....	23.7	36.8
November.....		85,239,181	— 5,157,821	951,465	543,703	.....	22.9	37.4
December.....		80,081,360	— 10,833,219	1,132,991	515,803	.....	22.3	36.6
1918.								
January.....	8,551,575	69,248,141	— 8,521,713	776,583	667,358	13,364,063	23.4	37.5
February.....	8,451,388	60,726,428	— 12,543,391	921,244	550,353	20,623,888	25.8	37.7
March.....	12,793,552	48,183,037	— 9,872,403	2,669,003	494,232	20,491,184	23.0	38.1
April.....	19,202,292	38,410,634	— 13,671,839	9,462,723	1,239,959	24,651,367	21.3	35.3
May.....	33,190,847	24,638,795	— 2,023,528	13,194,311	1,615,421	23,685,485	21.3	31.3
June.....	42,391,489	22,615,267	+ 10,923,708	10,123,740	1,999,375	23,316,116	22.0	31.2
July.....	30,819,027	35,538,975	+ 17,354,794	5,656,901	471,640	14,278,972	22.0	24.5
August.....	31,695,294	50,593,709	+ 6,221,167	2,326,324	451,956	23,599,759	24.6	35.7
September.....	26,998,447	57,114,936	— 14,614,581	1,270,205	14,481	40,387,304	27.9	37.6
October.....	19,899,779	42,500,355	— 8,228,341	549,515	37,072	27,615,376	33.8	39.5
November.....	13,028,695	34,272,014	— 7,787,535	740,859	8,016	20,083,297	33.3	41.4
December.....	9,967,360	26,484,479	— 5,595,823	715,763	12,181	14,859,601	35.0	43.2
1919.								
January.....	11,989,816	20,888,656	— 4,767,578	384,554	106,350	16,479,130	36.3	43.9
February.....	12,524,012	16,121,078	— 5,751,698	397,016	19,382	17,898,076	26.3	38.9
March.....	19,830,742	10,369,380	— 3,137,766	963,109	16,122	22,021,521	29.1	38.5
April.....	22,965,423	7,231,614	— 596,422	1,722,721	166,363	22,004,487	29.6	40.5
May.....	36,624,636	6,636,192	+ 5,841,515	1,732,286	1,058,462	30,100,207	39.4	42.4
June.....	46,989,500	12,477,707	+ 25,023,587	2,335,090	80,281	19,711,035	29.9	42.5
July.....	72,624,522	37,501,294	+ 25,143,850	988,788	35,225	78,527,109	31.1	44.1
August.....	72,909,466	62,645,144	+ 14,015,646	805,213	1,376,617	71,461,221	30.2	44.6
September.....	719,029,453	76,660,790	+ 4,698,680	671,334	1,656,053	75,315,497	28.2	44.8
October.....	(8)	81,359,470	— 8,470,534	1,141,403	1,787,403	(8)	28.3	44.4
November.....	(8)	72,888,936	— 10,591,195	1,765,781	3,547,276	(8)	30.5	44.6
December.....	(8)	762,297,741	.....	.....	.....	(8)	30.3	45.0

¹ Figures from Bureau of Markets, Department of Agriculture. Figures showing production prior to 1918 not available.

² Number of pounds in storage on the first of each month. Figures from Bureau of Markets.

³ During the month. Export figures do not include any amount sent in Army transports. Only that amount sent in merchant vessels is included.

⁴ The amount available for consumption equals production plus amount in storage at beginning of month, plus imports, minus exports, minus amount in storage at end of month.

⁵ The wholesale prices shown are those compiled each month by the Bureau of Labor Statistics from weekly quotations published in the Chicago Dairy Produce.

⁶ The retail prices are averages computed from reports sent to the Bureau of Labor Statistics each month by retail dealers in Chicago.

⁷ From preliminary reports of Bureau of Markets, Department of Agriculture, and subject to change.

⁸ Information not yet available.

TABLE 8.—COMPARISON OF PRODUCTION, STORAGE HOLDINGS, EXPORTS, IMPORTS, AMOUNT OF AMERICAN CHEESE AVAILABLE FOR CONSUMPTION, BY SEASONS, MAY, 1917, TO APRIL, 1918, AND MAY, 1918, TO APRIL, 1919.

Item.	May, 1917, to April, 1918.	May, 1918, to April, 1919.
	<i>Pounds.</i>	<i>Pounds.</i>
In storage at beginning of season.....	7,518,215	24,638,795
Produced during season.....	(¹)	281,300,841
Imported during season.....	7,858,411	4,918,359
Total.....		310,857,995
Exported during season.....	38,998,240	38,042,319
In storage at end of season.....	24,638,795	6,636,192
Total.....	63,637,035	44,678,511
Available for consumption.....	(¹)	266,179,484

¹ Information not available.

TABLE 9.—COMPARISON OF PRODUCTION, STORAGE HOLDINGS, EXPORTS, IMPORTS, AMOUNT AVAILABLE FOR CONSUMPTION, AND AVERAGE WHOLESALE AND RETAIL PRICES OF AMERICAN CHEESE FOR THE FIRST SIX MONTHS OF EACH YEAR, 1918 AND 1919.

Item.	First six months of—	
	1918	1919
	<i>Pounds.</i>	<i>Pounds.</i>
Total production.....	121,581,143	150,924,129
Average monthly storage holdings.....	43,953,717	12,287,437
Net amount of previous season's storage holdings marketed.....	46,632,874	14,252,464
Net amount placed in cold storage for current season.....	10,923,708	30,865,102
Total exports.....	37,144,604	7,534,785
Total imports.....	6,566,698	1,446,960
Total amount available for consumption.....	129,712,403	128,223,666
	<i>Cents.</i>	<i>Cents.</i>
Average wholesale price.....	23.0	30.3
Average retail price.....	36.2	41.1

TABLE 10.—PER CENT OF TOTAL STOCKS OF AMERICAN CHEESE HELD BY MANUFACTURERS, COLD STORAGE WAREHOUSES, WHOLESALE DEALERS, AND BY MISCELLANEOUS DEALERS, JANUARY AND JULY, 1918, AND JANUARY, 1919.

[From Food Surveys for June and 1 August, 1918, and 1 February and 1 March, 1919, published by Bureau of Markets, Department of Agriculture.]

Group	Total stocks.		Percentage of total stocks ¹ held by each group.			
	1918		1919		1918	1919
	January.	July.	January.	January.	July.	January.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>			
Total, all groups.....	141,639,322	174,163,338	161,028,598	100.0	100.0	100.0
Manufacturers.....	32,663,463	16,994,056	10,243,466	23.1	22.9	16.8
Cheese factories.....	24,673,360	14,953,338	9,370,469	17.4	20.2	15.4
Creameries.....	7,990,103	2,040,718	872,997	5.6	2.8	1.4
Cold storages.....	51,528,174	22,408,467	17,629,587	36.4	30.2	28.9
Wholesale dealers.....	53,402,057	34,068,286	32,689,178	37.7	45.9	53.6
Wholesale dealers in butter, eggs, and cheese.....	20,826,152	14,912,998	11,244,585	14.7	20.1	18.4
Wholesale grocers.....	16,997,355	7,683,206	5,838,176	12.0	10.4	9.6
Meat packers.....	12,086,783	7,864,029	12,995,307	8.5	10.6	21.3
Other wholesale dealers.....	3,491,767	3,608,053	2,611,110	2.5	4.8	4.3
Retail dealers.....	20,061,612	6,886,973	(²)			
Miscellaneous.....	4,045,628	692,529	466,367	2.8	1.0	.7
Condensaries.....		300,531	51,468		.4	.1
Bakers.....		211,286	205,424		.3	.3
Other miscellaneous.....		180,712	209,475		.2	.3

¹ Not including retail stocks.

² Figures showing retail stocks not available.

Export Figures.

The export figures used in this article in Tables 2, 3, and 4 for butter and in Tables 7, 8, and 9 for cheese have been those published by the Bureau of Foreign and Domestic Commerce of the Department of Commerce. These figures include only the amount of butter or cheese exported in merchant vessels. While Table 11 shows that the total amount of both butter and cheese exported during the 12 months ending June 30 of each year, 1913 to 1919, has greatly increased in the 6 years, this table and the figures in the tables referred to above take no account of the amount of butter that was sent out of the country during the period of the war on army transports. The amount sent on army transports, however, may be considered as supplying home needs, as all of this amount so sent was used for our own soldiers, with the exception of 4,970,000 pounds purchased by the French Government. However, in Table 12 is given the monthly amount of butter sent on army transports from June, 1917, to May, 1919. This information has been furnished by the Transportation Service, Quartermaster Corps, of the War Department. Similar information for cheese is not available, by months. However, the Subsistence Division of the Quartermaster Corps, War Department, has stated that the total amount of cheese exported in army transports during 1918 was 371,252 pounds, and that the total amount from January 1 to May 1, 1919, was 3,842,719 pounds, making a total since the beginning of 1918 of 4,213,971 pounds.

TABLE 11.—NUMBER OF POUNDS OF BUTTER AND CHEESE EXPORTED DURING THE 12 MONTHS ENDING JUNE 30 OF EACH YEAR, 1913 TO 1919.

Year ending June 30.	Number of pounds exported in merchant vessels.	
	Butter.	Cheese.
1913.....	3,585,600	2,599,058
1914.....	3,693,597	2,427,577
1915.....	9,850,704	53,362,917
1916.....	13,503,279	44,394,251
1917.....	26,835,092	66,050,013
1918.....	17,735,966	44,303,076
1919.....	33,739,960	18,794,853

TABLE 12.—NUMBER OF POUNDS OF BUTTER EXPORTED IN ARMY TRANSPORTS, BY MONTHS, JUNE, 1917, TO MAY, 1919.

Month.	Number of pounds.	Month.	Number of pounds.
1917.		1918—Concluded.	
June.....	62,000	July.....	1,244,000
July.....		August.....	1,720,000
August.....	68,000	September.....	3,104,000
September.....	262,000	October.....	3,114,000
October.....		November.....	1,230,000
November.....	528,000	December.....	8,162,000
December.....	460,000		
1918.		1919.	
January.....	154,000	January.....	4,482,000
February.....	672,000	February.....	2,788,000
March.....	1,274,000	March.....	862,000
April.....	704,000	April.....	14,850,000
May.....	1,312,000	May.....	1,090,000
June.....	1,274,000	Total.....	39,416,000

¹ Includes 3,972,000 pounds purchased by the French Government.² Includes 998,000 pounds purchased by the French Government.

Cost of Living in Germany, 1916 to 1918.

SUPPLEMENT 21 to the bulletin of the German Bureau of Labor Statistics contains the results of an investigation into the cost of living of German urban families made by the war committee on consumers' interests.¹ The investigation covers the month of April, 1918. It was preceded by three investigations covering April and July, 1916, and April, 1917. The results of the first two investigations were discussed in detail in the MONTHLY LABOR REVIEW of March, 1918 (pp. 13-28), and a brief account of the general results of the third investigation was given in the MONTHLY LABOR REVIEW of February, 1919 (pp. 602-603). Owing to lack of space only a brief comparison of the general results of the first, third, and fourth investigations can be given here.

The investigation of April, 1918, having covered families of the same income classes as the investigations of April, 1916 and 1917, the general results of these three investigations are comparable. The average expenditures in April, 1918, per unit of consumption for food, rent, clothing, fuel, light, and miscellaneous items, as compared with the same kind of expenditures in April, 1916 and 1917, are shown in the following table:

¹ Statistisches Reichsamt, Abteilung für Arbeiterstatistik. Beiträge zur Kenntnis der Lebenshaltung im vierten Kriegsjahre. (21. Sonderheft zum Reichs-Arbeitsblatt.) Berlin, 1919.

AVERAGE EXPENDITURES OF GERMAN URBAN FAMILIES PER UNIT OF CONSUMPTION, APRIL, 1916, 1917, AND 1918.¹

Item.	April, 1916.		April, 1917.		April, 1918.	
	Amount.	Per cent.	Amount.	Per cent.	Amount.	Per cent.
	<i>Marks.</i>		<i>Marks.</i>		<i>Marks.</i>	
Food.....	39.04	52.14	38.57	51.03	51.57	47.95
Fuel and light.....	2.70	3.61	4.11	5.44	5.81	5.40
Rent.....	7.99	10.67	8.51	11.26	8.92	8.29
Taxes.....	2.32	3.10	1.82	2.41	2.83	2.63
Clothing, shoes, repairs.....	5.70	7.61	7.49	9.91	18.03	16.75
Laundry, soap, soda.....	1.44	1.92	1.96	2.59	2.52	2.34
Household utensils, china, glassware.....	.48	.64	.99	1.31	1.46	1.36
Books and newspapers.....	.92	1.23	1.78	2.36	2.31	2.15
Car fares.....	1.17	1.56	1.18	1.56	1.90	1.76
Physician, medicines.....	1.09	1.46	.91	1.20	1.69	1.57
Barber, baths.....	.39	.52	.44	.58	.58	.54
Insurance.....	2.25	3.01	1.58	2.09	2.74	2.55
Dues for societies.....	.79	1.06	.61	.81	1.00	.94
Amusements, sports.....	1.09	1.46	.36	.48	.69	.64
Gifts.....	1.94	2.59	1.72	2.27	1.78	1.65
Wages, and tips.....	2.27	3.03	.92	1.22	.74	.69
Miscellaneous.....	3.29	4.39	2.63	3.43	2.99	2.79
Total.....	74.87	100.00	75.58	100.00	107.56	100.00

¹ Owing to the greatly depreciated value of the mark, conversions into United States money are not made in this table. Normally the value of the mark is 23.8 cents.

According to the preceding table the average monthly expenditures of German urban families in April, 1918, per unit of consumption, amounting to 107.56 marks, show a considerable increase over those in April, 1916 and 1917, which varied but slightly. Not only the total expenditures have greatly increased but all individual items of the household budgets, with the exception of wages and tips, show an increase. Such regular increases in all items of the budgets, which in the case of food and of clothing are very considerable, can not be ascribed to fortuitous causes but is due to general price conditions.

While the absolute figures merely indicate how much prices have risen in 1918 as compared with 1916 and 1917, the relative figures give an entirely different picture. They show that in 1918 the expenditures for food formed a smaller percentage of the budget than in the two preceding years, while on the other hand expenditures for clothing represented 16.75 per cent of the entire budget as against 7.61 and 9.91 per cent, respectively, in 1916 and 1917. A striking fact in the average German budget shown here is that rent forms such a relatively small percentage of the budget and that in 1918 this percentage was even lower than in 1917. This is probably due to energetic enforcement of legislation against rent profiteering. The relative expenditure for fuel and lighting was practically the same in 1918 as in 1917. The average per cent of expenditure in 1918 for the principal groups of items of cost of living of German urban families is compared in the next table with that of white families in industrial centers of the United States.¹

¹ MONTHLY LABOR REVIEW, August, 1919. P. 118.

COMPARATIVE PER CENT OF FAMILY EXPENDITURE FOR THE SEVERAL ITEMS OF EXPENSE IN GERMANY AND THE UNITED STATES IN 1918.

Item.	Per cent of total expenditure.	
	Germany.	United States.
Food.....	48.0	38.2
Clothing.....	16.7	16.6
Rent.....	8.3	13.4
Fuel and light.....	5.4	5.3
Furniture and furnishings.....	1.4	5.1
Miscellaneous.....	20.2	21.3
	100.0	100.0

This comparison shows that the average relative expenditure of German families for food was much larger and that for rent and for furniture considerably smaller than the expenditure of American families for the same items, and that the average relative expenditure for clothing, fuel and light, and miscellaneous items was practically the same in the case of both nations' urban families.

The average amount and per cent of expenditure for food and the average consumption of food per unit of consumption of German urban families in April, 1916, 1917, and 1918, are shown in the following table:

AVERAGE EXPENDITURE FOR AND CONSUMPTION OF FOOD BY GERMAN URBAN FAMILIES PER UNIT OF CONSUMPTION, APRIL, 1916, 1917, AND 1918.

Article.	Amount of expenditure.			Per cent of expenditure. ¹			Consumption per unit.		
	April, 1916.	April, 1917.	April, 1918.	April, 1916.	April, 1917.	April, 1918.	April, 1916.	April, 1917.	April, 1918.
Food consumed in the household:	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>				<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Bread, rolls, etc.....	3.44	3.51	4.28	9.69	10.42	9.70	18.31	18.53	19.74
Other bakery goods, cakes, etc.....	.85	.68	.82	2.39	2.02	1.86	1.03	.44	.92
Flour, frits, farinaceous foods, etc.....	1.48	1.67	2.08	4.17	5.85	4.71	3.21	4.42	3.51
Potatoes.....	2.06	1.43	3.72	5.80	4.24	8.43	37.02	24.11	48.07
Butter, lard, margarine, oil.....	4.16	3.17	4.33	11.72	9.42	9.81	1.90	1.19	1.45
Meat, sausage, ham, etc.....	6.55	7.59	7.54	18.46	22.53	17.08	3.36	4.28	3.24
Conserved meat.....	1.18	.24	.30	3.32	.71	.68	.83	.09	.54
Fish, smoked and fresh; crabs, etc.....	1.14	1.18	1.73	3.21	3.50	3.92	1.54	.89	1.71
Fish canned.....	.46	.25	.....	1.30	.74	.....	.35	.....	.....
Eggs.....	2.36	2.05	3.07	6.65	6.18	6.95	² 12.00	² 7.60	² 8.00
Milk, fresh.....	2.23	2.26	2.89	6.28	6.70	6.55	³ 8.45	³ 8.14	³ 9.51
Milk, conserved.....	.55	.45	.40	1.55	1.34	.91	.....	.....	.....
Cheese, cottage cheese, etc.....	1.01	.93	1.11	2.84	2.76	2.51	.80	.74	.87
Vegetables, fresh and dried; fruit.....	1.35	1.87	2.60	3.80	5.55	5.88	3.75	5.32	6.31
Canned fruits and vegetables.....	.73	.65	.64	2.06	1.13	1.45	1.92	.57	1.78
Jam, preserved fruit, etc.....	1.02	.85	2.95	2.87	2.52	6.68	1.96	1.37	3.38
Sugar.....	.77	.59	.76	2.17	1.75	1.72	2.61	1.68	1.86
Cocoa, chocolate, sweets.....	.70	.45	.45	1.97	1.34	1.02	.31	.....	.....
Spices, salt, vinegar, lemons.....	.57	.91	.68	1.61	2.70	2.22	.....	.....	.....
Coffee, pure and in mixtures.....	1.06	.33	.27	2.99	.68	.61	.49	.20	.53
Coffee substitutes.....	.40	.57	.78	1.13	1.69	1.77	.76	.88	.95
Nonalcoholic drinks, tea, etc.....	.42	.38	.49	1.18	1.13	1.11	.....	.....	.....
Food substitutes.....	.34	.33	.35	.96	.88	.79	.....	.....	.....
Other foodstuffs.....	.67	1.05	1.60	1.88	3.12	3.64	.....	.....	.....
Total.....	35.50	33.69	44.14	90.94	87.35	85.59	.....	.....	.....
Alcohol, tobacco, cigars.....	1.53	2.21	3.76	3.92	5.73	7.29	.....	.....	.....
Food and beverages consumed outside the house.....	2.01	2.67	3.67	5.14	6.92	7.12	.....	.....	.....
Grand total.....	39.04	38.57	51.57	100.00	100.00	100.00	.....	.....	.....

¹ The percentages shown for the individual food items are based on the total expenditure for food consumed in the household and not on the grand total of the table.

² Number.

³ Quarts.

The total monthly expenditure for food per unit of consumption fell from 39.04 marks in 1916 to 38.57 marks in 1917 and rose to 51.57 marks in 1918. In April, 1918, the expenditure for bread, potatoes, vegetables, and jam increased considerably, and only in the case of a few less important foodstuffs the expenditure decreased as compared with April, 1917. If the percentual expenditure for the individual food articles consumed in the household is considered it is found that in 1918 the expenditure for meat, sausages, ham, etc., formed only 17.08 per cent as against 22.53 per cent in 1917, a fact due to the lowering of the meat ration. The relative expenditure for potatoes formed 4.24 per cent of the total expenditure in 1917 and 8.43 per cent in 1918, owing to the doubling of the potato ration in the latter year. That for bread decreased from 10.42 per cent in 1917 to 9.70 per cent in 1918. The expenditure for jam and preserved fruit rose from 2.52 per cent in 1917 to 6.68 per cent in 1918, owing to a greatly increased ration. The relative expenditures for all other foodstuffs underwent less marked changes.

The data relating to the consumption of the individual foodstuffs show that on the whole there was a slight improvement in April, 1918, in the food supply as compared with April, 1917. The consumption of potatoes was twice as large as in 1917; that of bread also shows an increase. Meat was practically the only important foodstuff of which the consumption had decreased.

The present investigation has brought out the fact that the family budgets of all income classes covered showed an excess of expenditures over income which had to be made up for through the spending of former savings or the contracting of debts. In the three preceding investigations family budgets showing a deficit were found only in the three lowest income classes, i. e., those with incomes of under 100 marks, over 100 to 200 marks, and over 200 to 300 marks, while the investigation covering April, 1918, has revealed that households with an income of over 300 to 400 marks had the largest deficits and that even in households with incomes of over 400 to 500 marks, and of over 500 marks, the excess of expenditures over income was considerable. The average monthly deficit per gainfully engaged person was 20.34 marks in the case of workers' families and 49.33 marks in that of low-salaried officials.

WAGES AND HOURS OF LABOR.

Wages and Hours of Labor in Woodworking Industries.

IN THE following tables are presented statistics concerning hours and earnings of employees in such woodworking industries as were included in the recent industrial survey. Comparisons are also made with similar figures for earlier years gathered by the Bureau in previous investigations. The particular woodworking industries included in the survey were the manufacture of lumber, planing-mill products (sash, doors, and blinds), and furniture. The investigation of the furniture industry was confined to establishments engaged in the manufacture of plain or upholstered wooden furniture.

In each of the three industries the attempt was made to include in the survey a sufficient number of carefully selected establishments to give results that could be depended on as fairly typical. Table 1 shows what States were included in each industry, and the number of establishments and the number of employees in each State.

TABLE 1.—NUMBER OF ESTABLISHMENTS AND NUMBER OF EMPLOYEES IN THE LUMBER, MILLWORK, AND FURNITURE INDUSTRIES, BY STATES.

State.	Lumber industry.		Millwork industry.		Furniture industry.	
	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.
Alabama.....	6	981				
Arkansas.....	6	1,113				
California.....	7	936	15	1,004		
Florida.....	6	968				
Georgia.....	8	614	7	262		
Idaho.....	3	316				
Illinois.....			9	295	10	1,006
Indiana.....					10	1,364
Iowa.....			6	610		
Louisiana.....	8	1,178				
Maine.....	7	498				
Maryland.....					5	230
Massachusetts.....	6		8	266	8	915
Michigan.....		576	8	301	11	2,276
Minnesota.....	4	805	4	213		
Mississippi.....	6	1,291				
Missouri.....					8	485
Montana.....	3	459				
New Jersey.....					2	92
New York.....			13	555	14	1,167
North Carolina.....	7	681	3	146	7	623
Ohio.....			8	343	10	459
Oregon.....	6	1,321				
Pennsylvania.....	7	353	14	466	12	968
South Carolina.....	6	901				
Tennessee.....	8	365	4	119	5	497
Texas.....	5	830				
Virginia.....	9	832				
Washington.....	9	1,779				
West Virginia.....	8	659				
Wisconsin.....	6	625	6	859	9	1,389
Total.....	141	18,022	105	5,379	111	11,471

Owing to the conditions under which the survey was carried out it was impossible to obtain data for all establishments for the same pay-roll period. In normal times the spread of pay-roll periods over a reasonable time would make comparatively little difference in the results. At the time of the present survey, however, industry was so unsettled and conditions were changing so rapidly that the difference of two months in the time when particular establishments were visited might make material differences in the character of the information obtained. To assist the reader in estimating the effect of changing conditions upon the material herewith presented, there is shown in the following table for each industry the number of pay-roll periods falling in each month of the survey.

TABLE 2.—NUMBER OF PAY-ROLL PERIODS IN SPECIFIED MONTHS.

Industry.	Total number of pay- roll periods.	Number of pay-roll periods in—							
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.
Lumber.....	141	9	12	8	15	70	15	8	4
Millwork.....	105	1	1	4	45	19	12	19	4
Furniture.....	111			3	45	23	25	15	

In the different industries the following percentages fell within the four months, December, January, February, and March: Sawmills, 90 per cent; planing mills, 77 per cent; furniture, 96 per cent; the three industries combined, 87 per cent. The information is presented as of the year 1919. In no one of the industries, so far as could be ascertained, were there any changes in rates of wages during the progress of the survey.

The information concerning hours and earnings on which Tables 4 and 5 are based was obtained directly from the pay rolls or other records of the companies by agents of the Bureau. Other information was obtained from responsible officials in personal interviews. Wherever the records of the company failed to indicate the time actually worked by piece workers during the selected pay-roll period, arrangements were made to have such a record kept for a future period from which the data were afterwards copied. In all cases the figures copied by the agents represented hours actually worked and earnings actually received.

As the material comes into the office the figures for hours and those for earnings are both in incommensurable form on account of inequalities in the length of pay-roll periods and in the time worked by different individual employees. Before they can be presented in tabular form it is necessary to reduce both hours and earnings to a common denominator. The comparable figures selected for

use in Tables 4 and 5 are hours worked per day and per week, and earnings per hour and per week. These figures are obtained in the following manner:

The hours per day of each employee are obtained by dividing the number of hours worked by him during the pay-roll period by the number of week days, holidays omitted, in the pay-roll period. Thus in the case of pay rolls for a single week containing no holiday, the hours worked by each employee during the pay-roll period are divided by six, whether the employee worked on each of the six days or not. Similarly the hours actually worked by an employee in any establishment during a pay-roll period containing 13 workdays were divided by 13, regardless of the number of days on which the employee worked. The resulting figure represents the number of hours per day that the employee would have worked, if his time had been uniformly distributed among the week days of the pay-roll period.

All one-week pay rolls included in the survey of these industries were six-day pay rolls. The half-monthly and monthly pay-roll periods, however, showed considerable difference in length. Table 3 shows for each industry the number of schedules covering each specified number of work days.

TABLE 3.—SCHEDULE DISTRIBUTION BY NUMBER OF WORKDAYS IN PAY-ROLL PERIOD.

Industry.	Number of schedules in pay-roll period covering—									Total number of schedules.
	One week or 6 work days.	Two weeks, one-half month, or—				One month or—				
		11 work days.	12 work days.	13 work days.	14 work days.	24 work days.	25 work days.	26 work days.	27 work days.	
Lumber.....	55	—	19	18	7	3	9	3	27	141
Millwork.....	75	2	20	2	4	1	1	—	—	105
Furniture.....	79	1	20	3	8	—	—	—	—	111
Total.....	209	3	59	23	19	4	10	3	27	357

By using the average number of hours per week day as a factor it is possible to obtain a figure for the average number of hours worked per week by multiplying that factor in every case by 6. With one-week pay rolls the result represents approximately the original figure for hours per week actually worked. Such variations as are found are due to the fact that the average hours per day as given in the table are the averages of the hours of individual employees, with no weight to represent the proportion of the pay-roll period worked by different individuals. In the case of longer pay rolls, however, the resulting figure is hypothetical. It represents the number of hours per week that the employees would have worked in a six day week if their working hours had been distributed uniformly over the week days of the entire pay-roll period.

This figure of hours worked per week is no more useful for comparisons of hours in different occupations or industries than is the figure of hours per day. It has the advantage, however, of enabling comparisons to be drawn between the hours actually worked on the average by people in each occupation and the full-time hours of the same occupation.

By full-time hours per week is meant the number of hours that is thought of in the occupation as constituting a normal week's work—the number of hours the employee regularly expects to work and the employer expects him to work. This figure was obtained from the officials of the various establishments by the agents of the Bureau. The difference between average actual hours per week and average full-time hours per week is an indication of the degree of irregularity of employment among the employees to whom the figures apply.

Combining hours per day or hours per week computed from the records of one-week pay rolls with those computed from longer pay-rolls introduces a disturbing factor which must not be lost sight of in using the figures for comparative purposes. The figures for a group of employees computed for four weeks combined will differ from those computed for the same group of employees for any one of the same four weeks separately. This difference is always in the same direction, though varying in degree. The causes of it are twofold.

The first cause is related to the conduct of employees who remain on the pay roll throughout the four-week period. In any one week a certain percentage of these employees will be absent a number of days and consequently will show abnormally low hours per day. During the same week another group will do an unusual amount of overtime work and will show abnormally high hours per day. But while the percentages in these low and high groups in different weeks will run fairly uniform, the individuals in the groups change from week to week. The effect of this is to offset wholly or in part the abnormally high attendance record of an employee in one week by a normal or even abnormally low attendance record of the same employee in the other three weeks. The corresponding effect upon the hours per day of those with low-attendance record in any one week need not be shown at length.

So far as persistent employees are concerned the longer the period covered by the pay roll from which the data are obtained the smaller will be the number of employees found in the very high and very low hour groups and the larger the number in the intermediate groups. This movement, however, will have comparatively little effect upon

the final average; in fact, if the movement were perfectly symmetrical at both ends of the scale, the final average would remain unaffected.

The second cause is connected with the amount of labor turnover in different establishments. The number of short-time employees who leave permanently, and the equal number who take the places of those who leave, may be nearly the same from week to week. But the effect of this movement is cumulative, and will be approximately twice as great in a two-week period, and four times as great in a four-week period, as in any one of the weeks making up these longer periods. For this effect there is no offsetting factor. So far as this influence is concerned, therefore, the longer the pay-roll period, the lower will be the average hours per day.

For these reasons it is inadmissible to use the figures of average hours per week day or average hours per week for very close comparisons, without making allowance for the relative number of short and long pay-roll periods on which the averages are based. For practical purposes, however, the figures are sufficiently comparable to give a fairly accurate representation of relative hours of labor in different States, industries, or occupations, and of the percentage of the full time of each occupation which the employees in that occupation actually worked.

For comparative purposes the earnings of each employee are reduced to the form of average earnings per hour by dividing his total earnings for the pay-roll period by the total number of hours worked by him during the period. The resulting figure indicates how much he would have earned each hour he worked if his earnings had been distributed uniformly over all the hours actually worked by him during the period.

By multiplying the average hourly earnings of a group by the previously computed average hours per week worked by the same group, a figure is obtained which represents closely the average actual weekly earnings of the group. In the case of one-week pay rolls this process brings us back practically to the average actual earnings for the week as computed directly from the actual earnings of the individual employees as reported on the schedules. For employees with longer pay-roll periods, however, the average is not the average of what was actually earned in any one week, but the average of what would have been earned if they had worked the same number of hours on each week day of the pay-roll period. In some respects it is a more significant figure than the actual earnings for a single week; for in general the longer the pay-roll period from which average weekly earnings are computed, the more nearly typical may the resulting average be assumed to be.

One other somewhat variable factor involved in the figure for average actual weekly earnings should be pointed out. The practice of working fewer hours on Saturday than on other week days, while by no means universal, is widely prevalent, and the number of hours worked on Saturday varies more or less from establishment to establishment. Whenever fewer hours are worked on Saturday than on other days the theoretical figure for actual weekly earnings described above will express exactly what it professes to express (namely, the amount that would have been earned in a week if the earnings had been uniformly distributed) only in the case of employees for whom Saturdays constituted one-sixth of the total number of days worked by them. In all other cases the figure will vary by a few cents from theoretical exactness. If the number of Saturdays exceeds one in six, the computed weekly earnings will be somewhat too low; if the number is less than one in six the earnings will be correspondingly high. Careful experiment has shown, however, that these variations offset one another so largely that the net result is a variation of a cent or two at the most in the weekly average for the group, a variation so slight that it may be entirely disregarded.

Average actual earnings per week in each occupation, computed as described above, are brought into comparison in the tables with average full-time weekly earnings in the same occupation. In a general way the ratio of full-time earnings to actual earnings might be expected to be identical with the ratio of full-time hours to actual hours. As a matter of fact, however, these ratios may vary to a considerable extent. Actual earnings per week include the week's share of all extra pay for overtime and of all premiums and bonuses. Full-time earnings, on the other hand, represent what an employee can earn by working exactly the normal full-time hours of the establishment. The factor of extra pay for overtime, included in computing actual hourly earnings, was in general eliminated in computing full-time earnings. In those instances, however, which were comparatively rare in these industries, in which the normal working day consisted of a certain number of hours at a basic rate, and an additional hour or two at an increased rate, the extra pay for such additional hours was included in the full-time earnings. Each bonus had to be considered separately. Those that could be earned in regular time, as, for example, bonuses for regularity of attendance, were included; those that could be earned only by working overtime were excluded; while those earned partly in regular time and partly in overtime, as indicated by the relative amount of overtime work performed, were distributed accordingly. The result of eliminating these factors of extra pay for overtime and bonus is to reduce the ratio of full-time

earnings to actual earnings somewhat below the ratio of full-time hours to actual hours.

Owing to the necessary space limitations of an article of this nature it is possible to present in detail only a part of the information gathered during the survey. In the millwork industry alone are the data presented for all occupations included in the survey. In the other industries only those occupations have been shown in detail in which considerable numbers of employees were found. In the furniture industry the occupations given separately include 8,778 employees out of a total of 11,471. In the lumber industry 17,555 out of 18,022 employees are represented. In the figures for each industry as a whole are included the data for the occupations omitted in the detailed tables. The details here omitted will be presented in the final report on these industries. With the aid of the explanations already given as to the method of constructing the tables and the uses to which they may be put, the figures may be left to speak for themselves.

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN WOODWORKING INDUSTRIES, BY OCCUPATION, SEX, AND STATE.

Lumber.

Occupation, sex, and State.	Number of estab-lish-ments.	Number of em-ployees.	Average actual hours worked.				Full-time hours per week.	Average actual earnings.				Full-time earnings per week.
			During one pay period.			Per week day.		During one pay period.			Per hour.	
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.		
<i>Doggers, male.</i>												
Alabama.....	6	23	50.7	113.5	194.4	8.0	48.0	\$12.52	.....	\$55.13	\$0.261	\$12.53
Arkansas.....	6	22	56.4	125.0	177.7	8.9	53.4	17.48	\$31.58	72.14	.287	15.33
California.....	6	16	47.1	77.2	202.5	7.7	47.4	13.50	46.17	53.80	.400	18.96
Florida.....	6	30	49.9	97.0	194.2	8.1	48.6	10.71	14.14	57.65	.203	12.89
Georgia.....	7	16	54.4	116.9	201.5	7.6	45.6	17.92	38.87	100.49	.498	22.71
Idaho.....	3	9	57.4	107.0	170.0	9.1	54.6	19.72	.....	.....	.327	23.89
Louisiana.....	8	31	54.4	107.0	170.0	8.0	48.0	35.85	35.85	64.99	.344	19.65
Maine.....	10	10	57.4	107.0	170.0	8.0	48.0	30.09	47.98	85.51	.501	20.42
Michigan.....	6	20	59.0	99.2	223.7	8.0	48.0	15.14	27.20	74.14	.322	14.10
Minnesota.....	4	15	46.2	85.9	223.7	7.3	43.8	14.68	33.20	77.32	.470	19.35
Mississippi.....	6	30	46.2	85.9	223.7	7.3	43.8	14.68	33.20	77.32	.470	19.35
Montana.....	1	8	50.9	110.0	164.5	8.6	51.6	14.68	33.20	77.32	.470	19.35
North Carolina.....	7	19	50.9	110.0	164.5	8.6	51.6	14.68	33.20	77.32	.470	19.35
Oregon.....	6	25	50.9	110.0	164.5	8.6	51.6	14.68	33.20	77.32	.470	19.35
Pennsylvania.....	7	10	53.5	105.4	254.8	9.0	54.0	16.23	48.83	70.14	.355	18.94
South Carolina.....	6	28	53.5	105.4	254.8	9.0	54.0	16.23	48.83	70.14	.355	18.94
Tennessee.....	8	17	50.8	103.6	217.0	8.5	53.5	16.23	48.83	70.14	.355	18.94
Texas.....	5	39	50.8	103.6	217.0	8.5	53.5	16.23	48.83	70.14	.355	18.94
Virginia.....	9	35	50.0	95.0	250.0	8.3	51.0	15.91	59.68	59.68	.303	16.23
Washington.....	9	35	50.0	95.0	250.0	8.4	50.4	15.13	35.77	38.97	.338	12.78
West Virginia.....	9	40	50.0	95.0	250.0	8.4	50.4	15.13	35.77	38.97	.338	12.78
Wisconsin.....	8	18	60.0	63.8	218.2	9.2	55.2	24.00	32.99	85.95	.399	23.93
Wisconsin.....	6	14	60.0	119.2	218.2	9.2	55.2	24.00	42.27	87.39	.399	23.93
Total.....	136	471	51.8	100.2	172.3	7.8	46.8	16.02	36.20	71.79	.358	20.33
<i>Edgemen, male.</i>												
Alabama.....	6	13	51.8	119.5	227.6	8.5	51.0	15.09	.....	82.07	.324	16.52
Arkansas.....	6	16	55.0	119.5	187.0	9.1	54.6	22.00	75.57	104.28	.388	21.18
California.....	7	18	55.0	119.5	187.0	9.1	54.6	22.00	75.57	104.28	.388	21.18

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN WOODWORKING INDUSTRIES, BY OCCUPATION, SEX, AND STATE—Contd.
Lumber—Continued.

Occupation, sex, and State.	Number of establishments.	Number of employees.	Average actual hours worked.				Full-time hours per week.	Average actual earnings.				Full-time earnings per week.
			During one pay period.			Per week day.		During one pay period.			Per hour.	
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.		
Edgemen, male—Concluded.												
Florida.....	6	12	48.7	108.1	232.2	8.3	60.3	\$15.52	.....	\$75.84	\$17.18	\$20.86
Georgia.....	8	9	58.6	108.1	242.0	9.4	62.0	15.76	819.73	78.65	13.48	14.72
Iaho.....	3	17	.....	100.5	174.2	7.2	48.0	.....	.....	99.27	23.24	25.52
Louisiana.....	8	17	57.5	97.5	.....	9.6	60.0	24.66	39.00	.....	24.23	25.31
Maine.....	7	18	57.4	.....	.....	57.0	58.6	25.17	.....	.....	25.17	23.58
Michigan.....	6	15	.....	104.8	236.3	8.7	60.0	.....	42.31	96.14	21.04	23.58
Minnesota.....	4	23	60.6	107.6	181.9	8.5	59.9	30.92	53.11	90.41	23.60	30.09
Mississippi.....	6	15	45.1	107.9	205.7	7.9	60.0	16.36	40.43	80.20	17.96	22.72
Montana.....	3	10	.....	.....	180.3	7.1	50.4	.....	.....	105.19	24.41	28.92
North Carolina.....	7	12	52.0	105.5	.....	8.7	59.8	16.53	51.25	.....	17.80	20.76
Oregon.....	6	12	.....	104.6	177.7	7.2	48.0	.....	83.75	135.62	34.00	37.76
Pennsylvania.....	7	12	.....	112.3	215.0	8.9	60.1	18.18	51.79	90.30	24.24	27.23
South Carolina.....	6	12	50.9	.....	.....	8.5	50.9	20.66	.....	.....	18.18	21.51
Tennessee.....	7	12	54.6	.....	220.0	9.1	54.6	.....	.....	77.00	20.48	22.36
Texas.....	5	17	.....	97.5	123.3	6.5	39.0	.....	42.66	51.32	16.61	23.54
Virginia.....	8	17	56.7	120.0	250.0	9.5	60.0	19.72	48.00	112.50	20.18	21.18
Washington.....	9	16	.....	82.3	205.5	7.6	45.6	.....	58.61	145.26	32.19	33.88
West Virginia.....	8	16	60.0	128.2	236.6	8.9	59.7	.....	.....	113.38	25.26	28.24
Wisconsin.....	8	15	.....	.....	.....	9.9	60.0	21.00	52.00	.....	23.58	23.84
Total.....	140	314	54.7	108.9	200.0	8.4	57.5	20.62	49.26	103.06	22.08	25.30
Laborers, male.												
Alabama.....	6	870	46.6	.....	149.3	6.5	39.0	11.05	.....	37.79	9.44	14.33
Arkansas.....	6	1,000	50.0	93.4	.....	7.4	44.4	15.28	25.15	.....	12.43	16.78
California.....	7	798	.....	105.3	169.8	7.0	42.0	.....	37.83	70.70	16.55	19.33
Florida.....	6	859	46.8	.....	157.3	7.1	42.6	12.01	30.63	.....	10.61	15.18
Georgia.....	8	531	115.4	73.9	115.4	7.1	42.6	11.64	12.88	29.37	8.78	12.65
Idaho.....	3	243	.....	82.7	163.0	6.3	37.8	.....	39.75	78.16	13.03	22.31
Louisiana.....	8	1,042	52.1	77.3	.....	8.4	48.0	16.42	19.63	.....	14.67	17.47

	7	366	53.8	105.8	209.5	9.0	53.8	50.3	18.54	346	18.54	20.07
Maine.....	6	477	50.7	100.4	209.5	8.7	52.2	60.0	33.37	316	16.50	18.75
Michigan.....	4	670	50.7	100.4	141.6	6.9	41.4	60.0	20.05	386	15.98	23.12
Minnesota.....	3	1,168	48.7	77.1	188.3	6.5	39.6	48.2	14.35	472	11.76	17.84
Mississippi.....	6	388	48.7	77.1	163.8	6.6	39.6	50.9	23.02	265	18.41	24.63
Montana.....	7	582	48.6	97.2	137.5	8.1	48.6	59.7	27.79	381	12.88	15.79
North Carolina.....	6	1,167	48.6	97.2	137.5	8.1	48.6	48.0	48.15	518	18.03	24.86
Oregon.....	7	283	49.0	102.7	210.2	8.3	49.0	60.1	39.82	381	18.97	22.88
Pennsylvania.....	7	788	49.0	102.7	210.2	8.3	49.0	60.1	39.82	257	12.73	15.47
South Carolina.....	6	788	46.4	84.9	154.7	7.3	43.8	58.9	41.22	292	12.79	16.84
Tennessee.....	8	293	46.4	84.9	154.7	7.3	43.8	58.9	41.22	312	11.04	18.71
Texas.....	5	698	48.5	106.5	126.0	5.9	36.0	60.0	38.25	295	14.16	17.65
Virginia.....	9	695	48.5	106.5	126.0	8.0	48.0	60.3	29.59	513	17.85	24.63
Washington.....	9	1,547	51.8	82.6	140.8	5.8	34.8	47.4	41.39	391	15.48	23.44
West Virginia.....	8	556	51.8	82.6	140.8	6.6	39.6	59.9	34.54	317	15.60	19.04
Wisconsin.....	6	521	51.8	106.3	173.0	8.2	49.2	60.0	15.10	345	14.70	19.23
Total.....	141	15,542	49.6	91.5	154.7	7.1	42.6	55.9	14.13	345	14.70	19.23
<i>Machine feeders, male.</i>												
Alabama.....	5	29	46.4	105.2	132.2	6.3	37.8	60.0	11.25	251	9.49	15.08
Arkansas.....	6	44	53.0	121.3	196.7	8.2	49.2	60.0	16.89	299	14.71	17.92
California.....	36	27	52.4	70.4	233.0	8.3	52.2	50.7	16.27	446	22.21	21.92
Florida.....	6	28	46.1	78.5	103.9	6.6	39.6	61.4	11.35	298	15.56	17.90
Georgia.....	2	15	53.2	76.4	103.9	5.0	30.0	48.0	12.61	201	7.90	12.27
Idaho.....	2	15	53.2	76.4	103.9	5.0	30.0	48.0	12.61	201	7.90	12.27
Louisiana.....	8	41	53.2	76.4	103.9	8.6	51.6	60.0	16.99	488	14.64	23.41
Maine.....	7	15	55.0	116.5	216.8	9.2	55.0	58.9	20.77	313	16.15	18.75
Michigan.....	16	16	57.1	107.0	227.6	8.9	53.4	60.0	16.99	377	20.77	22.00
Minnesota.....	4	4	47.0	90.7	181.9	8.9	53.4	60.0	16.99	350	18.69	20.06
Mississippi.....	25	36	57.1	90.7	227.6	7.7	46.2	59.9	19.94	396	18.30	23.95
Montana.....	3	18	57.1	90.7	227.6	8.1	48.6	60.0	16.96	321	15.60	19.29
North Carolina.....	3	33	57.3	116.3	172.4	6.8	40.8	51.3	83.79	486	22.13	23.92
Oregon.....	33	33	57.3	116.3	172.4	9.6	57.6	59.5	34.96	385	22.13	17.76
Pennsylvania.....	52	52	58.7	115.6	182.2	7.0	42.0	48.0	54.99	587	24.65	28.17
South Carolina.....	10	10	58.7	115.6	182.2	9.6	57.6	60.0	48.29	419	24.13	25.14
Tennessee.....	32	9	58.1	94.8	230.0	9.8	58.7	60.2	17.47	298	17.47	17.94
Texas.....	2	2	58.1	94.8	230.0	9.8	58.7	60.2	17.47	333	19.27	18.58
Virginia.....	38	38	55.4	98.6	123.4	6.5	39.0	60.0	37.53	342	13.34	20.54
West Virginia.....	31	31	55.4	98.6	123.4	9.0	54.0	60.6	34.09	327	17.66	19.83
Washington.....	89	89	55.4	98.6	123.4	6.5	39.0	48.0	83.37	538	21.76	26.81
Wisconsin.....	18	18	40.0	116.8	208.8	8.1	48.6	60.0	48.73	386	19.25	23.74
Total.....	25	25	40.0	116.8	208.8	8.9	53.4	60.0	40.15	336	17.94	20.16
Total.....	120	698	54.0	99.1	178.1	7.8	46.8	56.5	16.38	390	18.25	21.13
<i>Sawyers, band, male.</i>												
Alabama.....	4	8	60.0	123.9	143.2	7.1	42.6	60.0	46.00	781	33.27	46.88
Arkansas.....	6	11	56.7	120.3	143.2	9.4	56.4	60.6	48.17	768	33.32	46.06
California.....	16	16	57.4	120.3	143.2	7.9	47.4	53.3	88.31	776	26.78	41.11
Florida.....	4	9	57.4	120.3	143.2	9.7	58.2	60.0	44.90	792	46.09	47.85

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN WOODWORKING INDUSTRIES, BY OCCUPATION, SEX, AND STATE—Contd.

Lumber—Concluded.

Occupation, sex, and State.	Number of establishments.	Number of employees.	Average actual hours worked.				Full-time hours per week.	Average actual earnings.				Full-time earnings per week.	
			During one pay period.			Per week day.		During one pay period.			Per hour.		
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.			
<i>Sawyers, band, male—Concluded.</i>													
Georgia.....	3	4	60.0	120.0	240.0	9.9	59.4	\$48.00	\$66.00	\$153.00	\$0.700	\$41.58	\$42.00
Idaho.....	2	10	58.1	104.0	180.0	7.2	48.0	55.03	100.88	157.00	.892	38.53	42.82
Louisiana.....	5	13	58.4	109.9	190.3	9.7	58.1	36.83	66.64	103.77	.650	55.03	56.97
Maine.....	5	7	60.0	120.0	240.0	9.7	58.4	54.00	109.67	205.43	.632	36.83	36.25
Michigan.....	5	12	60.0	126.0	261.7	7.9	47.0	42.57	71.26	188.85	.625	28.63	36.32
Minnesota.....	4	14	65.0	86.0	212.4	9.9	59.4	36.53	73.50	121.04	.853	50.67	51.11
Mississippi.....	4	9	59.6	115.0	207.5	7.6	45.6	48.00	96.00	168.00	.817	37.26	49.03
Montana.....	3	9	59.6	115.0	207.5	8.3	49.8	36.53	73.50	121.04	.942	46.91	48.43
North Carolina.....	6	10	59.6	115.0	207.5	9.9	59.4	48.00	96.00	168.00	.618	36.71	36.86
Oregon.....	5	10	59.6	115.0	207.5	7.9	47.4	48.00	96.00	168.00	1.160	55.67	55.67
Pennsylvania.....	7	10	52.4	122.4	247.8	9.9	59.4	37.02	74.83	157.24	.618	36.71	37.08
South Carolina.....	6	13	54.7	105.0	210.0	8.7	52.4	34.72	69.45	114.00	.701	37.02	42.15
Tennessee.....	8	11	54.7	105.0	210.0	9.1	54.6	34.72	69.45	114.00	.634	34.02	37.38
Texas.....	4	14	58.4	120.0	240.0	7.3	43.8	35.46	66.00	137.50	.799	35.00	47.93
Virginia.....	9	15	58.4	120.0	240.0	9.7	58.2	35.46	66.00	137.50	.600	34.92	35.92
Washington.....	8	12	58.4	120.0	240.0	7.2	43.2	35.46	66.00	137.50	1.029	44.45	49.39
West Virginia.....	8	20	58.4	120.0	240.0	8.0	48.0	39.00	78.00	156.00	.645	30.96	38.54
Wisconsin.....	6	12	60.0	130.8	211.9	10.1	60.6	39.00	84.10	137.40	.641	38.84	38.47
Total.....	120	249	57.3	113.1	202.7	8.7	52.2	41.96	85.45	161.82	.768	40.09	43.69
<i>Others, male.</i>													
Alabama.....	6	12	57.1	115.1	158.5	8.0	48.0	17.36	34.72	59.64	.331	15.89	19.87
Arkansas.....	6	6	58.3	115.1	158.5	9.0	54.0	23.33	41.49	59.64	.370	19.98	22.17
California.....	7	23	55.5	107.2	173.4	7.4	44.4	20.54	52.58	85.78	.481	21.36	24.99
Florida.....	6	6	55.5	107.2	173.4	8.7	52.2	15.87	31.74	47.61	.354	18.48	21.02
Georgia.....	8	8	56.8	107.7	240.0	9.3	55.8	28.28	56.56	84.00	.276	15.40	16.89
Idaho.....	3	14	55.5	104.0	187.8	7.5	45.0	57.89	115.78	173.67	.557	25.07	26.72
Louisiana.....	8	15	55.5	133.5	187.8	9.3	55.8	22.66	45.32	68.00	.412	22.89	24.72

Maine.....	12	55.2	191.3	9.2	55.2	58.7	22.20	404	22.20	23.09
Michigan.....	14	58.3	111.8	8.5	51.0	60.0	21.02	424	21.02	24.73
Minnesota.....	16	58.3	119.0	8.6	51.6	59.9	27.24	428	27.24	31.59
Mississippi.....	14	59.5	95.2	8.7	52.2	60.0	30.15	386	30.15	23.13
Montana.....	3	49.4	115.5	7.5	45.0	52.1	116.24	602	27.09	31.63
North Carolina.....	7	49.4	103.5	8.4	45.0	59.5	16.52	327	16.48	19.79
Oregon.....	12	55.2	168.3	7.1	42.6	48.0	101.45	599	25.52	28.76
Pennsylvania.....	11	59.1	98.3	8.6	51.6	60.0	121.90	486	25.08	29.15
South Carolina.....	11	50.2	235.0	9.8	50.1	60.1	21.03	356	21.03	21.91
Tennessee.....	11	50.2	118.1	8.4	50.4	58.8	18.32	364	18.35	21.42
Texas.....	11	49.4	126.1	7.5	45.0	60.0	49.99	401	18.05	24.05
Virginia.....	17	49.4	120.0	8.4	50.4	60.2	17.99	363	18.00	21.01
Washington.....	9	87.5	183.7	8.0	42.0	48.0	107.27	591	24.82	23.39
West Virginia.....	8	60.0	118.5	8.6	51.6	59.7	52.50	404	23.94	27.54
Wisconsin.....	14	55.8	230.3	9.3	55.8	60.0	47.83	393	22.10	23.79
Total.....	141	54.5	111.0	8.3	49.8	57.0	20.43	446	22.21	25.95
All occupations, United States.....	141	50.3	93.4	7.2	43.2	59.1	15.05	360	15.55	20.03

Millwork.

California.....	14	42.4	105.0	7.3	43.8	46.5	\$28.33	\$61.95	\$87.76	\$27.38	\$33.02
Georgia.....	55	51.8	83.0	8.6	51.6	56.2	22.75	438	22.00	21.54	23.40
Illinois.....	9	42.4	105.2	7.4	44.4	48.9	21.80	41.47	21.45	22.45	25.36
Iowa.....	131	53.9	105.2	8.9	53.4	57.6	21.01	306	21.85	23.44	25.36
Massachusetts.....	72	46.7	91.7	7.8	46.8	47.9	21.78	42.05	21.14	23.44	25.36
Michigan.....	8	52.7	103.6	8.1	48.6	51.1	20.27	373	19.92	21.54	23.44
Minnesota.....	4	54.2	103.6	8.9	53.4	58.1	19.83	39.56	23.09	21.54	23.44
New York.....	231	48.3	94.5	8.0	48.0	48.7	23.02	481	16.78	18.45	21.54
North Carolina.....	3	53.4	81.6	8.2	49.2	53.4	21.63	311	16.78	18.45	21.54
Ohio.....	85	50.8	95.3	8.0	48.0	52.2	21.15	417	21.46	23.84	25.36
Pennsylvania.....	100	49.1	81.6	8.2	49.2	52.6	22.51	460	22.63	23.80	25.36
Tennessee.....	14	50.8	95.3	8.2	49.2	51.5	19.40	420	19.40	21.56	23.80
Texas.....	35	46.1	108.3	7.7	46.2	51.5	19.59	313	18.32	21.56	23.80
Wisconsin.....	6	58.4	108.3	8.9	53.4	58.1	22.57	451	22.19	23.48	25.36
Total.....	104	49.3	100.9	8.2	49.2	52.5	22.57	451	22.19	23.48	25.36
Laborers, male.											
California.....	15	42.2	84.2	7.1	42.6	47.8	18.06	424	18.06	20.23	23.40
Georgia.....	7	44.3	75.2	7.4	44.4	56.1	10.67	245	10.88	13.75	15.03
Illinois.....	9	47.6	109.7	7.6	45.6	48.9	14.71	309	14.09	15.03	16.31
Iowa.....	51	52.7	83.3	8.9	53.4	58.6	15.21	285	15.21	16.31	17.59
Massachusetts.....	210	47.1	104.6	7.8	46.8	47.6	15.75	325	15.21	15.44	16.31
Michigan.....	26	48.7	83.3	7.8	46.8	51.6	15.31	291	13.62	15.85	17.59
Minnesota.....	150	48.7	104.6	8.9	53.4	58.5	15.31	267	14.26	15.54	17.59
Total.....	51	52.7	104.6	8.9	53.4	58.5	15.31	267	14.26	15.54	17.59

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN WOODWORKING INDUSTRIES, BY OCCUPATION, SEX, AND STATE—Contd.

Millwork—Concluded.

Occupation, sex, and State.	Average actual hours worked.				Average actual earnings.				Full-time earnings per week.			
	Number of establishments.	Number of employees.	During one pay period.		Per week.	Full-time hours per week.	During one pay period.			Per hour.	Per week.	
			Weekly pay periods.	Biweekly and semi-monthly pay periods.			Monthly pay periods.	Weekly pay periods.				Biweekly and semi-monthly pay periods.
<i>Laborers, male—Concluded.</i>												
New York.....	13	100	49.3	.....	8.2	49.2	52.7	\$14.53	.....	\$ 2.96	\$14.56	\$15.71
North Carolina.....	3	58	50.1	75.7	6.7	40.2	51.7	12.81	\$19.58	.....	10.33	13.26
Ohio.....	8	83	49.8	94.7	8.3	49.8	50.8	14.72	35.71	.....	14.99	15.31
Pennsylvania.....	13	120	48.9	96.2	8.1	48.6	51.2	15.60	31.08	.....	15.55	17.14
Tennessee.....	4	42	49.4	.....	8.3	49.8	51.2	13.97	.....	.....	14.09	14.40
Wisconsin.....	5	260	57.6	102.9	8.6	51.6	57.9	13.45	27.58	.....	13.26	14.56
Total.....	102	1,756	48.5	93.6	7.9	47.4	53.1	14.74	29.89	\$62.75	15.22	16.69
<i>Machine hands, male.</i>												
California.....	15	337	42.9	84.7	7.1	42.6	47.0	26.60	13.84	83.22	23.98	26.25
Georgia.....	7	94	51.3	.....	8.6	51.6	56.0	20.43	.....	.....	21.05	22.84
Illinois.....	9	119	44.9	73.4	7.3	43.8	49.0	21.71	36.17	.....	21.29	23.56
Iowa.....	6	199	54.5	113.7	9.2	55.2	58.0	20.59	46.08	.....	21.42	22.04
Massachusetts.....	8	108	45.2	.....	7.5	45.0	47.6	22.80	.....	.....	22.68	23.94
Michigan.....	8	92	54.7	98.7	8.6	51.6	54.1	21.19	39.21	.....	20.43	21.42
Minnesota.....	91	54.2	106.3	.....	9.0	54.0	58.1	20.42	36.92	.....	19.44	20.83
New York.....	4	224	49.1	.....	8.2	49.2	50.5	22.52	.....	.....	21.86	23.21
North Carolina.....	13	53	52.8	84.0	8.2	43.8	52.1	16.09	26.46	13.38	21.30	22.17
Ohio.....	8	142	49.3	100.8	8.2	49.2	51.6	20.75	58.45	4.33	21.30	22.17
Pennsylvania.....	14	202	52.1	96.3	8.3	49.8	53.0	24.46	41.90	.....	22.41	23.55
Tennessee.....	4	42	49.5	.....	8.3	49.8	52.0	19.47	.....	.....	19.47	20.25
Wisconsin.....	6	321	58.3	107.8	8.9	53.4	57.9	18.24	35.62	.....	17.36	18.01
Total.....	105	2,024	49.3	100.9	8.2	49.2	52.8	22.13	39.92	83.22	21.40	22.34

<i>Laborers, female.</i>									
Iowa.....	3	67	56.0	107.2	.....	9.1	54.6	60.0	11.97
Wisconsin.....	3	82	51.1	91.3	.....	7.9	47.4	55.5	9.46
Other States.....	6	76	48.3	89.3	180.3	.....	44.4	49.5	11.44
Total.....	12	225	52.8	96.9	180.3	8.1	48.6	54.7	11.27
<i>All occupations, male.</i>									
All occupations, male.....	105	5,154	49.1	97.8	174.5	8.1	48.6	52.8	20.24
All occupations, female.....	12	225	52.8	96.9	180.3	8.1	48.6	54.7	11.27
All occupations, male and female	105	5,379	49.2	97.8	175.0	8.1	48.6	52.9	20.05

Furniture.

<i>Cabinetmakers, male.</i>									
Illinois.....	10	142	55.0	106.3	.....	8.8	52.8	56.8	\$21.03
Indiana.....	10	153	53.8	102.1	.....	8.9	53.4	57.9	19.39
Maryland.....	5	39	51.9	98.6	.....	8.7	52.2	55.9	22.82
Massachusetts.....	3	122	43.3	100.8	.....	7.2	43.2	46.8	22.89
Michigan.....	8	213	52.1	116.4	.....	8.5	51.0	54.6	21.80
Missouri.....	7	75	53.6	116.4	.....	9.0	54.0	56.7	19.10
New York.....	12	158	52.2	.....	.....	8.7	52.2	54.9	20.35
North Carolina.....	4	54	57.8	110.8	.....	8.6	51.6	53.3	18.59
Ohio.....	6	40	57.5	91.1	.....	9.1	54.6	56.0	20.97
Pennsylvania.....	10	132	54.7	113.2	.....	9.1	54.6	57.5	20.02
Tennessee.....	5	72	51.9	.....	.....	8.7	52.2	55.8	20.53
Wisconsin.....	8	231	48.6	113.9	.....	8.8	52.8	59.2	18.58
Other States.....	1	18	48.0	.....	.....	8.0	48.0	48.0	23.88
Total.....	89	1,449	51.6	108.0	.....	8.6	51.6	55.7	20.64
<i>Finishers, male.</i>									
Illinois.....	10	167	50.9	105.2	.....	8.4	50.4	57.0	18.61
Indiana.....	10	239	54.4	104.9	.....	8.0	53.4	58.5	17.28
Maryland.....	5	58	48.6	116.9	.....	8.3	48.6	55.2	18.92
Massachusetts.....	8	118	48.7	.....	.....	8.1	48.3	52.6	18.39
Michigan.....	11	459	51.1	100.3	.....	8.3	49.8	54.0	19.05
Missouri.....	8	90	52.7	.....	.....	8.8	52.8	55.7	19.02
New Jersey.....	2	18	55.0	.....	.....	9.2	55.2	55.3	24.73
New York.....	14	238	51.6	.....	.....	8.5	51.0	56.0	20.02
North Carolina.....	7	98	55.0	86.3	.....	7.0	42.0	52.6	13.21
Ohio.....	9	86	47.5	121.1	.....	8.3	49.8	53.6	16.16
Pennsylvania.....	12	209	53.6	108.5	.....	8.9	53.4	57.3	19.05
Tennessee.....	5	79	48.4	.....	.....	8.1	48.6	55.9	14.34
Wisconsin.....	9	240	46.4	115.3	.....	8.9	53.4	59.0	17.24
Total.....	110	2,099	51.2	104.6	.....	8.5	51.0	55.9	18.55

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN WOODWORKING INDUSTRIES, BY OCCUPATION, SEX, AND STATE.—Contd.
Furniture—Continued.

Occupation, sex, and State.	Number of establishments.	Average actual hours worked.				Full-time hours per week.	Average actual earnings.				Full-time earnings per week.	
		During one pay period.			Per week.		During one pay period.			Per hour.		Per week.
		Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.			
<i>Laborers, male.</i>												
Illinois.....	10	52.3	100.3	.....	50.4	8.4	56.8	\$15.40	\$34.00	.....	\$0.322	\$16.23
Indiana.....	10	51.3	98.4	.....	51.0	8.5	58.7	12.09	24.17	.....	.224	11.42
Maryland.....	5	52.1	99.7	.....	51.0	8.5	57.2	13.53	20.52	.....	.234	11.86
Massachusetts.....	8	51.3	.....	.....	51.6	8.6	54.3	16.82	.....	.....	.226	11.36
Michigan.....	11	330	49.4	98.5	47.4	7.9	53.8	15.31	29.18	.....	.301	14.27
Missouri.....	8	102	53.7	.....	53.4	8.9	56.5	13.11	.....	.....	.246	13.11
New Jersey.....	2	7	55.8	.....	55.8	9.3	55.9	14.11	.....	.....	.258	14.11
New York.....	14	132	52.6	.....	51.6	8.6	56.2	13.88	.....	.....	.263	13.88
North Carolina.....	7	128	51.5	88.5	44.4	7.4	53.3	9.20	20.37	.....	.223	11.89
Ohio.....	10	65	46.5	116.3	48.6	8.1	57.4	11.27	33.54	.....	.256	12.44
Pennsylvania.....	12	92	44.5	85.7	44.4	7.4	57.4	12.33	17.74	.....	.261	11.59
Tennessee.....	5	111	48.8	.....	48.6	8.1	56.6	10.07	.....	.....	.224	10.97
Wisconsin.....	9	187	47.4	108.3	51.6	8.6	55.9	13.17	27.63	.....	.258	13.31
Total.....	111	1,835	50.5	91.7	49.8	8.3	56.0	13.64	26.72	.....	.265	13.20
<i>Machine hands, male.</i>												
Illinois.....	10	225	54.4	107.1	52.8	8.8	57.0	20.23	43.02	.....	.389	20.54
Indiana.....	10	323	55.6	111.1	53.8	9.3	58.0	18.38	31.49	.....	.314	17.52
Maryland.....	5	55	52.9	105.0	53.4	8.9	56.0	22.76	28.26	.....	.384	20.51
Massachusetts.....	8	292	52.3	.....	54.3	8.7	54.3	20.81	.....	.....	.402	21.63
Michigan.....	11	539	51.7	98.3	48.6	8.1	54.0	21.29	38.86	.....	.401	19.40
Missouri.....	7	146	54.9	.....	54.6	9.1	56.3	19.50	.....	.....	.356	19.50
New Jersey.....	2	25	49.2	.....	49.2	8.2	50.9	24.81	.....	.....	.502	24.81
New York.....	14	318	54.5	.....	54.0	9.0	56.2	19.32	.....	.....	.354	19.32
North Carolina.....	6	205	52.6	94.2	45.6	7.6	51.9	14.10	28.48	.....	.297	13.54
Ohio.....	10	148	49.7	118.0	53.4	8.6	55.8	18.43	42.83	.....	.361	18.63
Pennsylvania.....	12	219	54.2	105.0	51.6	8.9	57.2	19.63	32.84	.....	.357	19.06

Tennessee.....	5	115	51.3	.....	8.6	51.6	56.0	18.37	.....	354	18.37	19.72
Wisconsin.....	8	366	46.2	116.2	8.9	53.4	59.1	17.11	34.18	310	16.55	18.25
Total.....	108	2,976	53.0	105.6	8.7	52.2	56.0	19.68	35.80	349	18.22	20.05
<i>Upholsterers, male.</i>												
Illinois.....	5	147	50.9	93.2	8.4	50.4	54.3	25.52	45.34	499	25.15	27.08
Indiana.....	2	25	48.5	.....	8.1	48.6	57.0	19.74	.....	397	19.74	22.57
Maryland.....	2	16	47.3	.....	7.9	47.4	52.0	31.60	.....	671	31.60	34.87
Massachusetts.....	5	22	46.4	.....	7.7	46.2	50.0	28.97	.....	621	28.97	30.59
Michigan.....	6	24	53.3	112.0	8.8	52.8	53.8	21.50	46.67	409	21.60	21.98
New York.....	78	48.0	.....	.....	8.0	48.0	57.3	21.30	.....	445	21.30	25.28
North Carolina.....	3	19	.....	96.9	7.5	45.0	50.5	.....	34.37	330	13.75	17.68
Ohio.....	5	18	45.4	128.0	7.9	47.4	53.3	20.98	44.19	439	20.81	23.49
Pennsylvania.....	5	5	50.0	109.5	8.6	51.6	55.7	20.99	54.00	450	23.22	25.05
Wisconsin.....	3	48	50.6	111.5	8.7	52.2	53.7	25.34	37.18	463	24.17	25.65
Other States.....	2	17	50.5	.....	8.4	50.4	53.5	24.22	.....	493	24.22	25.87
Total.....	44	419	49.1	102.1	8.2	49.2	54.4	24.18	41.38	476	23.42	25.86
All occupations, male.....	111	10,556	51.7	104.5	8.5	51.0	55.2	18.70	35.90	349	17.80	19.39
<i>Finishers, female.</i>												
Illinois.....	4	16	53.4	89.4	8.1	48.6	51.9	14.76	21.94	270	13.12	14.01
Indiana.....	5	22	53.8	108.6	9.0	54.0	60.2	11.51	18.77	198	10.69	11.70
Massachusetts.....	4	6	51.8	.....	8.6	51.6	53.0	13.62	.....	267	13.62	13.98
Michigan.....	6	86	50.2	96.2	8.1	48.6	53.9	12.59	22.75	234	11.86	13.17
Missouri.....	3	3	47.2	.....	7.9	47.4	53.7	10.35	.....	217	10.35	11.63
New York.....	3	22	53.7	.....	8.5	51.0	54.0	12.49	.....	233	12.49	13.37
Pennsylvania.....	5	30	43.9	.....	7.3	43.8	54.0	11.00	.....	246	11.00	13.29
Tennessee.....	2	10	42.4	.....	7.1	42.6	56.2	8.40	.....	200	11.16	11.16
Other States.....	3	9	50.0	119.7	8.8	52.8	54.2	11.50	18.63	164	8.66	8.91
Total.....	34	204	49.3	101.0	8.1	48.6	54.4	12.01	21.35	235	11.42	12.78
<i>Laborsers, female.</i>												
Illinois.....	1	9	.....	99.2	8.1	48.6	51.9	.....	.....	245	11.93	12.72
Indiana.....	2	73	54.5	104.0	8.8	52.8	59.8	10.01	24.22	174	9.19	10.39
Massachusetts.....	4	8	47.6	.....	7.9	47.4	51.0	9.36	17.53	198	9.36	10.69
Michigan.....	7	90	48.4	88.9	7.6	45.6	54.0	10.91	17.24	210	9.58	11.86
Missouri.....	2	10	41.9	.....	7.5	45.0	50.3	8.83	.....	195	8.83	9.70
New York.....	2	12	51.5	76.4	8.6	51.6	54.0	11.47	12.75	223	11.47	12.03
Pennsylvania.....	8	52	49.0	.....	7.8	46.8	54.1	10.52	.....	208	9.73	11.24
Tennessee.....	2	11	48.9	.....	8.2	49.2	56.1	8.00	.....	166	8.00	9.30
Wisconsin.....	2	33	.....	104.2	7.8	46.8	55.0	.....	16.25	155	8.13	9.50
Other States.....	1	3	48.0	.....	8.0	48.0	48.0	13.80	.....	288	13.80	13.81
Total.....	35	301	49.5	98.0	8.0	48.0	55.4	10.35	17.40	195	9.36	10.79

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN WOODWORKING INDUSTRIES, BY OCCUPATION, SEX, AND STATE—Contd.

Furniture—Concluded.

Occupation, sex, and State.	Number of establishments.	Number of employees.	Average actual hours worked.					Average actual earnings.					Full-time earnings per week.	
			During one pay period.				Per week.	During one pay period.				Per hour.		Per week.
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per week day.		Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.				
<i>Machine hands, female.</i>														
Indiana.....	2	33	54.0	106.2	.....	8.9	53.4	\$11.88	\$18.96	.....	\$0.180	\$9.61	\$10.77	
Massachusetts.....	2	12	47.2	.....	.....	7.9	47.4	11.98	.....	.....	.254	11.98	13.73	
Michigan.....	3	44	46.7	103.0	.....	7.9	47.4	11.20	23.17	.....	.211	11.42	12.76	
New York.....	6	17	52.7	.....	.....	8.5	51.0	13.94	.....	.....	.263	13.94	14.93	
Pennsylvania.....	4	15	48.8	108.5	.....	8.3	49.8	13.39	20.62	.....	.265	13.39	14.36	
Other States.....	2	7	54.0	.....	.....	9.0	54.0	15.60	.....	.....	.289	15.60	15.62	
Total.....	19	128	54.6	104.7	.....	8.3	49.8	13.66	21.02	.....	.235	11.70	12.95	
All occupations, female.....	60	915	49.0	101.0	.....	8.1	48.6	11.10	19.37	.....	.214	10.40	11.72	
All occupations, male and female.	111	11,471	51.4	104.3	.....	8.5	51.0	18.05	34.03	.....	.338	17.24	18.78	

The woodworking industries here considered are noteworthy for the small number of female employees engaged in them. No women were found engaged in the manufacture of lumber. In planing mills there were 225 females out of a total of 5,379 employees. In the furniture industry 915 female employees were found in a total of 11,528 employees: female employees therefore constituted 7.9 per cent of the total number included in the survey of this industry. In 1915, the date of the last previous investigation of the industry by the Bureau, the corresponding figures were 325 in a total of 25,576, or a trifle over $1\frac{1}{4}$ per cent.

In 1919 the 915 female employees in the furniture industry were found in five occupations, and constituted 10.5 per cent of the total number in these occupations. The occupations, the number of women in each occupation, and the percentage which females constitute of the entire number of employees in the occupation are as follows:

TABLE 5.—NUMBER AND PER CENT OF FEMALES IN THE FURNITURE INDUSTRY.

Occupation.	Total employees.	Females.	
		Number.	Per cent.
Finishers.....	2,303	204	8.9
Laborers.....	2,136	301	14.1
Machine hands.....	3,104	128	4.1
Sanders, hand.....	739	248	33.6
Veneerers.....	420	34	8.1
Total.....	8,702	915	10.5

For only three of these occupations, namely, finishers, laborers, and machine hands, are detailed figures given in the general table just presented. The following brief analysis includes as well the two occupations, hand sanders and veneerers, previously omitted.

The earnings of female employees in the different occupations are from 7 to 12 cents per hour below those of males in corresponding occupations. In general, the larger the percentage of females in an occupation the lower the earnings of both males and females and the smaller the difference between the two figures. These facts may be clearly brought out by grouping the occupations according to the proportion of women in them and comparing the average wages of men and women in the different groups. The results of such procedure are herewith shown.

TABLE 6.—HOURLY EARNINGS BY OCCUPATIONS CLASSIFIED ACCORDING TO PERCENTAGE OF FEMALES.

Number of occupations.	Number of—		Per cent of females.	Average hourly earnings.	
	Employees.	Females.		Males.	Females.
Six occupations with no females.....	2,769			0.407	
Three occupations with 1 to 10 per cent females.....	5,827	366	6.3	.352	0.235
Two occupations with 10 to 50 per cent females.....	2,875	519	19.1	.274	.200

Wages of men and women in different occupations, therefore, seem to vary inversely as the proportion of women in the occupations, whether because the women more easily find an entrance into the low-paid occupations, or because the entrance of women into an occupation tends to lower the scale of wages in that occupation. Probably both influences are at work, the one enhancing the effect of the other.

On their face the figures for the earnings of men and women respectively in the furniture industry seem to furnish an illustration of the generally accepted view that women are paid less than men for the same kind and amount of work. A further analysis of the figures, however, on the basis of the respective earnings of male and female piece and time workers, seems to point to a different conclusion. The details of the analysis require too much space for a MONTHLY LABOR REVIEW article. They will be given in full in the forthcoming Bulletin dealing with those industries. They may be summarized as follows:

Whether we include figures from all establishments in which the five occupations under consideration were found, or only those from establishments in which both males and females were found in the several occupations, or, finally, only those from establishments in which both male and female piece and time workers were found, the earnings of male piece workers are found to exceed those of female piece workers more than the earnings of male time workers exceed those of female time workers. The last basis of comparison may be considered the most reliable, in spite of the fact that it very much reduces the numbers included, since it also diminishes the probability that the differences discovered are due to other causes than the sex of the employees or the method of wage payment.

Establishments with both male and female piece and time workers were found for only two occupations, finishers and machine hands. The data from these establishments is presented in the following table:

TABLE 7.—MALE AND FEMALE PIECE AND TIME WORKERS, IDENTICAL ESTABLISHMENTS.

Occupation.	Males.				Females.			
	Piece.		Time.		Piece.		Time.	
	Num-ber.	Earn-ings.	Num-ber.	Earn-ings.	Num-ber.	Earn-ings.	Num-ber.	Earn-ings.
Finishers.....	110	\$0.482	125	\$0.327	27	\$0.266	16	\$0.216
Machine hands.....	27	.409	89	.390	20	.237	11	.205
Total.....	137	.468	214	.353	47	.254	27	.212

The female timeworkers whose record is summarized in the table just presented were paid wages averaging 14.1 cents less per hour than the male timeworkers in the same occupations. Apparently, therefore, women were doing equal work with men and receiving only 60 per cent of the pay. But the comparative hourly earnings of pieceworkers seem to indicate that in these occupations women were worth less than men; for, while working at the same piece rate, female pieceworkers earned 21.4 cents per hour less than male pieceworkers; that is, their earnings were only 54.3 per cent of the earnings of the male pieceworkers. If, then, it is to be assumed that when men and women are working at the same occupation they are doing the same kind of work, this comparison would seem to indicate that in this particular case female timeworkers were paid more rather than less than male timeworkers in proportion to the amount of work they were doing. This condition suggests the necessity of using caution in applying the doctrine of "equal pay for equal work" for men and women.

In the following tables are shown relative hours and earnings for selected occupations in the three woodworking industries for the years for which the Bureau had the necessary data. The figures for 1913 are in all cases used as the base. The comparison is necessarily confined to those occupations for which the requisite information is at hand in comparable form. Owing to certain differences in the method of tabulating the data for 1919 as compared with the method followed in earlier years, it is impossible to compute relatives for male laborers. Moreover, female employees were not tabulated separately in any furniture occupation in earlier years, and consequently can not be included in the table of relatives.

There is presented in the table not only relatives for selected occupations but also relatives for each industry as a whole. It seems desirable to point out certain features of the method by which those relatives were computed. In the first place the averages of hours

and earnings on which the 1919 relative is based cover only selected occupations. In earlier years the relative has been based on all wage-earning employees found in the establishments visited. Those employees who did not fall within any of the selected occupations were grouped in the tables under the caption "other employees." This was done, not because of any value that was supposed to attach to figures for this heterogeneous group, but because it was feared that the omission of these employees might seriously affect the averages for the industry as a whole. Careful experiments carried out by the Bureau indicate that, if the selected occupations include low-paid groups, such as laborers, in proportion to their numbers in the industry, the omission of "other employees" has little effect upon industry averages.

In the second place, it should be stated that the industry averages given in the table are based on all of the occupations listed in the several industries and not on those to which limitations of space made it necessary to confine the present article. The total number of selected occupations used in computing the industry relative was 7 in the furniture industry and 10 in the lumber industry. In the millwork industry no occupations were listed in addition to the three included in this report.

Finally no attempt has been made to base the relatives on data from identical establishments. With the changes that the lapse of time since the last investigation has brought about in the different establishments, the plan of confining the comparison to data from identical establishments would have two disadvantages. It would in some cases seriously limit the numbers on which the comparative figures are based; in other cases it might give undue weight to changes in hours and earnings taking place in one or another of the limited number of establishments covered, when those changes did not reflect conditions in the industry as a whole. The present relatives are based on the entire body of information available for each year for which a relative is shown.

TABLE 8.—AVERAGE AND RELATIVE FULL-TIME HOURS PER WEEK, HOURLY EARNINGS AND FULL-TIME EARNINGS PER WEEK, IN WOODWORKING INDUSTRIES, BY OCCUPATION, SEX, AND YEAR.

Lumber.

Occupation, sex, and year.	Number of establishments.	Number of employees.	Average.			Relative.		
			Full-time hours per week.	Hourly earnings.	Full-time weekly earnings.	Full-time hours per week.	Hourly earnings.	Full-time weekly earnings.
Doggers, male:								
1913.....	334	939	61.2	\$0.184	\$11.22	100.0	100.0	100.0
1915.....	345	1,099	61.3	.178	10.83	100.2	96.7	96.5
1919.....	136	471	57.8	.358	20.69	94.4	194.6	181.2
Edgemen, male:								
1913.....	361	754	61.0	.268	16.23	100.0	100.0	100.0
1915.....	348	756	61.0	.252	15.32	100.0	94.0	94.1
1919.....	140	314	57.5	.450	25.76	94.3	167.9	155.4
Laborers, male:								
1913.....	361	28,835	61.1	.171	10.40	100.0	100.0	100.0
1915.....	348	36,569	61.3	.157	9.58	100.3	91.8	92.1
1919.....	141	15,542	55.9	.345	19.27	91.5	201.8	184.9
Machine feeders, male:								
1913.....	253	1,531	61.1	.186	11.34	100.0	100.0	100.0
1915.....	269	1,679	61.2	.176	10.74	100.2	94.6	94.7
1919.....	120	668	56.5	.390	21.70	92.5	209.7	186.3
Sawyers, band, male:								
1913.....	288	554	60.9	.557	33.90	100.0	100.0	100.0
1915.....	286	572	61.0	.539	32.75	100.2	96.8	96.6
1919.....	120	249	57.5	.768	44.06	94.4	137.9	128.9
Sawyers, circular, male:								
1913.....	92	123	62.0	.513	31.71	100.0	100.0	100.0
1915.....	76	98	62.1	.462	28.27	100.2	90.1	89.2
1919.....	30	37	57.3	.748	42.77	92.4	145.8	132.4
Sawyers, gang, male:								
1913.....	71	80	61.4	.311	19.02	100.0	100.0	100.0
1915.....	81	93	61.8	.289	17.74	100.7	92.9	93.3
1919.....	34	46	56.2	.520	29.14	91.5	167.2	150.6
Sawyers, resaw, male:								
1913.....	138	192	60.7	.261	15.77	100.0	100.0	100.0
1915.....	152	215	60.9	.240	14.57	100.3	92.0	92.4
1919.....	67	111	55.2	.471	25.90	90.9	180.5	160.3
Setters, male:								
1913.....	361	782	61.0	.258	15.71	100.0	100.0	100.0
1915.....	348	687	61.2	.239	14.56	100.3	92.6	92.7
1919.....	141	311	57.0	.446	25.49	93.4	172.9	158.8
Trimmer operators, male:								
1913.....	346	538	61.0	.217	13.20	100.0	100.0	100.0
1915.....	345	564	61.1	.203	12.34	100.2	93.5	93.5
1919.....	139	273	57.3	.405	23.18	93.9	186.6	171.9
All occupations, male:								
1913.....	361	24,328	61.1	.185	11.26	100.0	100.0	100.0
1915.....	348	39,879	61.1	.169	10.30	100.0	91.4	91.5
1919.....	141	18,622	56.1	.360	20.13	91.8	194.6	177.9

Millwork.

Bench hands, male:								
1913.....	339	5,119	54.4	\$0.318	\$17.00	100.0	100.0	100.0
1915.....	346	4,931	54.3	.317	16.91	99.8	99.7	99.5
1919.....	104	1,374	52.5	.451	23.48	96.5	141.8	138.1
Laborers, male:								
1913.....	317	5,267	56.8	.183	10.34	100.0	100.0	100.0
1915.....	329	5,224	56.7	.184	10.40	99.8	100.5	100.6
1919.....	102	1,756	53.1	.321	16.69	93.5	175.4	161.4
Machine hands, male:								
1913.....	339	6,154	55.6	.294	15.09	100.0	100.0	100.0
1915.....	347	5,973	55.5	.283	15.46	99.8	96.3	96.1
1919.....	105	2,024	52.8	.435	22.34	95.0	143.0	138.8
All occupations, male:								
1913.....	339	16,540	55.6	.266	14.54	100.0	100.0	100.0
1915.....	347	15,727	55.4	.263	14.29	99.6	98.9	98.3
1919.....	165	5,154	52.8	.401	20.36	95.0	150.8	140.0

TABLE 8.—AVERAGE AND RELATIVE FULL-TIME HOURS PER WEEK, HOURLY EARNINGS AND FULL-TIME EARNINGS PER WEEK, IN WOODWORKING INDUSTRIES, BY OCCUPATIONS, SEX, AND YEAR—Concluded.

Furniture.

Occupation, sex, and year.	Number of establishments.	Number of employees.	Average.			Relative.		
			Full-time hours per week.	Hourly earnings.	Full-time weekly earnings.	Full-time hours per week.	Hourly earnings.	Full-time weekly earnings.
Cabinetmakers, male:								
1913.....	199	3,184	57.2	\$0.234	\$13.30	100.0	100.0	100.0
1915.....	203	3,176	57.0	.210	13.62	99.7	102.6	102.4
1919.....	89	1,449	55.7	.396	22.05	97.4	169.2	165.8
Finishers, male:								
1913.....	228	5,287	57.2	.207	11.81	100.0	100.0	100.0
1915.....	238	5,300	56.9	.208	11.80	99.5	100.5	99.9
1919.....	110	2,099	55.9	.358	19.98	97.7	192.9	169.3
Carvers, hand, male:								
1913.....	82	355	55.1	.319	17.41	100.0	100.0	100.0
1915.....	97	321	55.5	.322	17.73	100.7	100.9	101.8
1919.....	36	111	52.9	.511	26.98	96.0	160.2	155.0
Chair assemblers, male:								
1913.....	23	562	57.5	.197	11.27	100.0	100.0	100.0
1915.....	31	591	57.6	.211	12.09	100.2	107.1	107.3
1919.....	26	521	54.4	.362	19.69	94.6	183.6	174.7
Machine hands, male:								
1913.....	226	6,700	57.6	.218	12.50	100.0	100.0	100.0
1915.....	232	5,817	57.5	.223	12.74	99.8	102.3	101.9
1919.....	108	2,976	56.0	.349	20.05	97.2	160.1	160.4
Upholsterers, male:								
1913.....	54	635	55.8	.296	16.42	100.0	100.0	100.0
1915.....	62	755	55.3	.312	17.12	93.1	105.4	104.3
1919.....	44	419	54.4	.476	25.86	97.5	160.8	157.5
Veneerers, male:								
1913.....	123	698	57.2	.218	12.45	100.0	100.0	100.0
1915.....	124	640	57.0	.218	12.34	99.7	100.0	99.1
1919.....	69	389	56.3	.340	19.14	98.4	156.0	155.7
All occupations, male:								
1913.....	228	17,378	57.3	.222	12.64	100.0	100.0	100.0
1915.....	223	15,173	57.1	.224	12.74	99.7	100.9	100.8
1919.....	111	7,964	55.7	.389	20.55	97.2	166.2	162.6

The industrial survey covered eight industries for which the Bureau had material on hand for the calculation of industry relatives. That the increases in earnings in the industries included in this report may be compared with increases in the other five industries, the relatives of each industry are given in the following table:

TABLE 9.—RELATIVE EARNINGS PER HOUR IN EIGHT INDUSTRIES, 1913 TO 1919.
[1913=100.]

Year.	Cigars.	Clothing, men's.	Furniture.	Hosiery and underwear.	Iron and steel.	Lumber.	Mill-work.	Silk goods.
1913.....	100	100	100	100	100	100	100	100
1914.....	(1)	(1)	(1)	103	103	(1)	(1)	(1)
1915.....	(1)	(1)	103	(1)	101	91	99	(1)
1916.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
1917.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
1918.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
1919.....	152	171	154	184	221	194	151	191

1 Not reported.

An examination of this table shows that while employees in the lumber industry have received increases in earnings considerably in excess of the average for the eight industries and of the 75 per cent increase in the cost of living since 1913, both the furniture industry and the millwork industry have failed to keep pace with the general movement. On the contrary, the millwork industry is at the bottom of the list in this respect, and the furniture industry only slightly better off. How far that condition is to be attributed to the effect of the war, and how far to the existence of large numbers of comparatively small, isolated, and unorganized plants in those industries, it is impossible to determine.

War-Time Changes in Wages.

THE National Industrial Conference Board has recently published a report on wages in several important industries, from 1914 to 1919.¹ The report includes data for boot and shoe, chemical, cotton, metal, paper, rubber, silk, and woolen manufacturing. The period covered is approximately that of the war, including that immediately following the signing of the armistice. A large number of tables are given showing for the leading occupations or occupation groups of each industry the number of workers for whom the data are reported; the average hours worked per week; the average hourly and weekly earnings; and the relative hourly and weekly earnings for the period covered, using the figures for 1914 as a base.

The following table contains summaries of the items named above for each of the industries included in the study:

AVERAGE ACTUAL AND RELATIVE HOURLY AND WEEKLY EARNINGS IN SPECIFIED INDUSTRIES, 1914 TO 1919.

Boot and shoe manufacturing: 14 establishments.

Pay roll for one week in—	Males.						Females.					
	Total number of workers.	Average hours per week.	Average actual earnings—		Relative earnings—		Total number of workers.	Average hours per week.	Average actual earnings—		Relative earnings—	
			Per hour.	Per week.	Per hour.	Per week.			Per hour.	Per week.	Per hour.	Per week.
Sept., 1914..	7,575	50.3	\$0.292	\$14.70	100	100	3,841	47.9	\$0.192	\$9.18	100	100
Sept., 1915..	7,259	50.8	.302	15.33	104	104	3,605	49.3	.193	9.53	101	104
Sept., 1916..	8,241	51.1	.325	16.60	112	113	4,191	50.5	.207	10.45	108	114
Sept., 1917..	7,373	49.9	.388	19.36	133	132	4,308	47.0	.243	11.42	127	125
Sept., 1918..	7,349	49.2	.489	24.04	167	164	4,305	47.7	.298	14.24	155	155
Mar., 1919..	7,419	48.0	.539	25.90	185	176	4,667	47.7	.308	14.69	160	160

¹ War-time changes in wages. September, 1914—March, 1919. National Industrial Conference Board. Boston, September, 1919. 128 pp.

AVERAGE ACTUAL AND RELATIVE HOURLY AND WEEKLY EARNINGS IN SPECIFIED INDUSTRIES, 1914 TO 1919—Concluded.

Chemical manufacturing: 12 establishments.

Pay roll for one week in—	Males.						Females.					
	Total number of workers.	Average hours per week.	Average actual earnings—		Relative earnings—		Total number of workers.	Average hours per week.	Average actual earnings—		Relative earnings—	
			Per hour.	Per week.	Per hour.	Per week.			Per hour.	Per week.	Per hour.	Per week.
Sept., 1914..	3,551	55.5	\$0.232	\$12.85	100	100	.....	.....	.....	.....	.....	.....
Sept., 1915..	3,865	56.0	.237	13.26	102	103	.....	.....	.....	.....	.....	.....
Sept., 1916..	4,724	55.8	.289	16.10	125	125	.....	.....	.....	.....	.....	.....
Sept., 1917..	6,790	57.1	.350	20.50	155	160	.....	.....	.....	.....	.....	.....
Sept., 1918..	6,946	60.1	.445	26.80	192	209	.....	.....	.....	.....	.....	.....
Mar., 1919..	5,942	53.5	.490	26.20	211	204	.....	.....	.....	.....	.....	.....

Cotton manufacturing: 15 establishments.

Sept., 1914..	5,187	52.9	\$0.189	\$10.00	100	100	4,924	50.9	\$0.152	\$7.70	100	100
Sept., 1915..	5,736	53.0	.189	10.05	100	101	5,166	51.8	.152	7.89	100	103
Sept., 1916..	5,650	53.5	.221	11.85	117	119	5,052	51.8	.186	9.65	122	125
Sept., 1917..	5,842	50.7	.280	14.22	148	142	5,202	51.0	.222	11.36	146	147
Sept., 1918..	4,925	53.7	.385	20.60	204	206	5,138	50.4	.304	15.37	200	200
Mar., 1919..	5,797	43.9	.389	17.10	206	171	5,943	41.0	.312	12.75	205	166

Metal manufacturing: Males, 72 establishments; females, 13 establishments.

Sept., 1914..	35,552	45.5	\$0.289	\$13.18	100	100	669	43.3	\$0.149	\$6.45	100	100
Sept., 1915..	43,696	52.1	.282	14.90	98	113	926	46.1	.169	7.82	113	121
Sept., 1916..	55,924	53.8	.317	17.22	110	131	1,767	45.8	.194	8.92	130	138
Sept., 1917..	64,156	53.6	.371	20.09	128	152	1,741	47.3	.223	10.55	150	164
Sept., 1918..	71,635	53.5	.495	26.80	171	203	2,331	46.1	.309	14.35	207	222
Mar., 1919..	56,253	49.0	.502	24.75	174	188	2,006	46.0	.314	14.50	211	225

Paper manufacturing: Males, 32 establishments; females, 15 establishments.

Sept., 1914..	8,505	53.3	\$0.239	\$12.73	100	100	779	42.3	\$0.177	\$7.47	100	100
Sept., 1915..	8,976	52.5	.243	12.75	102	100	856	44.3	.178	7.85	100	105
Sept., 1916..	9,602	51.0	.295	15.03	124	118	968	46.3	.191	8.80	108	118
Sept., 1917..	9,520	51.0	.374	19.03	157	150	889	45.3	.230	10.43	130	140
Sept., 1918..	9,830	50.0	.448	22.40	188	176	941	47.5	.294	13.95	166	187
Mar., 1919..	9,579	49.8	.450	22.40	189	176	986	41.3	.297	12.24	168	164

Rubber manufacturing: Males, 8 establishments; females, 6 establishments.

Sept., 1914..	9,612	48.8	\$0.288	\$14.00	100	100	1,819	53.2	\$0.174	\$9.25	100	100
Sept., 1915..	12,701	48.3	.310	14.95	108	107	1,992	54.1	.189	10.20	109	110
Sept., 1916..	15,863	48.7	.382	18.60	133	133	2,479	51.6	.208	10.76	120	117
Sept., 1917..	19,225	48.9	.466	22.80	162	163	3,397	51.7	.228	11.80	131	128
Sept., 1918..	16,722	49.6	.575	28.60	200	204	3,501	52.2	.247	12.94	142	140
Mar., 1919..	21,918	48.0	.612	29.35	212	210	3,431	51.1	.292	14.90	168	161

Silk manufacturing: 29 establishments.

Sept., 1914..	4,897	51.2	\$0.230	\$11.77	100	100	6,312	48.2	\$0.156	\$7.49	100	100
Sept., 1915..	4,922	51.5	.238	12.66	104	108	6,456	51.2	.157	8.02	101	107
Sept., 1916..	5,010	49.6	.284	14.10	124	120	6,794	49.2	.193	9.52	124	127
Sept., 1917..	4,778	50.2	.309	15.50	134	132	6,619	50.0	.215	10.75	138	144
Sept., 1918..	4,151	50.0	.431	21.54	188	183	6,095	49.3	.285	14.06	183	188
Mar., 1919..	4,539	50.1	.453	22.69	197	193	6,178	48.5	.312	15.10	200	202

Wool manufacturing: 20 establishments.

Sept., 1914..	9,105	53.8	\$0.215	\$11.52	100	100	6,943	52.0	\$0.167	\$8.70	100	100
Sept., 1915..	8,957	51.5	.214	11.05	100	96	6,648	48.8	.162	7.89	97	91
Sept., 1916..	9,875	54.0	.251	13.51	117	117	7,243	51.8	.199	10.30	119	118
Sept., 1917..	9,558	55.0	.308	16.97	143	147	7,279	50.5	.250	12.69	150	146
Sept., 1918..	9,406	55.0	.424	23.21	197	202	7,576	50.0	.329	16.42	197	189
Mar., 1919..	7,868	46.0	.405	18.61	188	162	6,635	41.0	.328	13.46	196	155

While the figures show, with few exceptions, an increasing hourly rate of earnings throughout the period, the weekly earnings show small increases, or, in several instances, decreases, between September, 1918, and March, 1919. This is due to the shorter hours worked in 1919, the reduction in a number of cases being considerable.

The following table shows the average hourly earnings in several occupations in the industries covered by the report, arranged in order beginning with the highest based on wages in March, 1919. The earnings of males and females are shown separately.

COMPARISON OF AVERAGE HOURLY EARNINGS IN DIFFERENT OCCUPATIONS IN SEPTEMBER, 1914 AND 1918, AND MARCH, 1919.

Occupations.	Piece or time workers.	Average hourly earnings.		
		September, 1914.	September, 1918.	March, 1919.
<i>Males.</i>				
1. Stitchers (boot and shoe).....	Piece.....	\$0.365	\$0.628	\$0.687
2. Coremakers (metal).....	do.....	.304	.683	.651
3. Molders (metal).....	do.....	.309	.666	.642
4. Finishers (boot and shoe).....	do.....	.330	.540	.638
5. Patternmakers (metal).....	Time.....	.380	.603	.638
6. Bottomers (boot and shoe).....	Piece.....	.340	.570	.626
7. Molders (metal).....	Time.....	.363	.606	.621
8. Lasters (boot and shoe).....	Piece.....	.315	.562	.612
9. Assemblers (metal).....	do.....	.307	.558	.603
10. Toolmakers (metal).....	Time.....	.356	.557	.594
11. Blacksmiths (metal).....	do.....	.328	.567	.592
12. Upper leather cutters (boot and shoe).....	Piece.....	.331	.550	.591
13. Machinists (metal).....	Time.....	.324	.572	.587
14. Makers (boot and shoe).....	Piece.....	.324	.555	.586
15. Machine operators (metal).....	do.....	.325	.551	.577
16. Skilled labor (chemicals).....	Time.....	.300	.526	.574
17. Sole leather cutters (boot and shoe).....	Piece.....	.271	.469	.552
18. Sorters (wool).....	do.....	.296	.586	.552
19. Coremakers (metal).....	Time.....	.297	.518	.541
20. Upper leather cutters (boot and shoe).....	do.....	.289	.499	.539
21. Assemblers (metal).....	do.....	.307	.502	.530
22. Machine tenders (paper).....	do.....	.309	.530	.520
23. Loom-fixers (cotton).....	do.....	.262	.514	.505
24. Fitters (boot and shoe).....	Piece.....	.274	.482	.486
25. Unskilled labor (silk).....	Time.....	.251	.472	.477
26. Weavers (wool).....	do.....	.252	.521	.471
27. Weavers (silk).....	Piece.....	.216	.441	.467
28. Machine operators (metal).....	Time.....	.265	.454	.461
29. Weavers (wool).....	Piece.....	.225	.472	.457
30. Unskilled labor (chemicals).....	Time.....	.210	.408	.446
31. Beatermen (paper).....	do.....	.232	.440	.440
32. Sole leather cutters (boot and shoe).....	do.....	.254	.405	.428
33. Unskilled labor (metal).....	do.....	.216	.438	.426
34. Foundry labor (metal).....	do.....	.218	.431	.425
35. Finishers and cuttermen (paper).....	do.....	.227	.407	.420
36. Weavers (silk).....	do.....	.302	.433	.419
37. Reelers, winders, and spoolers (wool).....	do.....	.201	.418	.417
38. Calendermen (paper).....	do.....	.204	.403	.414
39. Calendermen (rubber).....	do.....	.225	.375	.409
40. Unskilled labor (rubber).....	do.....	.205	.388	.409
41. Unskilled labor (wool).....	do.....	.201	.384	.406
42. Warpors (silk).....	do.....	.226	.375	.406
43. Miscellaneous labor (paper).....	do.....	.202	.465	.406
44. Spinners (cotton).....	Piece.....	.190	.422	.401
45. Makers (rubber).....	Time.....	.191	.361	.398
46. Spinners (wool).....	do.....	.182	.407	.394
47. Rag sorters (paper).....	do.....	.206	.405	.392
48. Weavers (cotton).....	Piece.....	.198	.417	.389
49. Weavers (cotton).....	Time.....	.186	.377	.389
50. Finishers (wool).....	do.....	.215	.391	.385
51. Carders (wool).....	do.....	.177	.376	.381
52. Finishers (boot and shoe).....	do.....	.217	.357	.383
53. Carders (cotton).....	Piece.....	.187	.437	.380

COMPARISON OF AVERAGE HOURLY EARNINGS IN DIFFERENT OCCUPATIONS IN SEPTEMBER, 1914 AND 1918, AND MARCH, 1919—Concluded.

		Average hourly earnings.		
Occupations.	Piece or time worker.	September, 1914.	September, 1918.	March, 1919.
<i>Males—Concluded.</i>				
54. Lasters (boot and shoe).....	Time.....	\$0.226	\$0.368	\$0.373
55. Spoolers, warpers, twisters (cotton).....	do.....	.176	.319	.361
56. Dyers (wool).....	do.....	.175	.351	.356
57. Miscellaneous labor (boot and shoe).....	do.....	.215	.317	.352
58. Carders (cotton).....	do.....	.172	.377	.352
59. Unskilled labor (cotton).....	do.....	.177	.340	.351
60. Openers and pickers (cotton).....	do.....	.158	.339	.349
61. Spinners (cotton).....	do.....	.166	.339	.343
62. Spinners (wool).....	Piece.....	.162	.345	.329
<i>Females.</i>				
1. Finishers (wool).....	Piece.....	.215	.421	.442
2. Weavers (wool).....	do.....	.201	.392	.418
3. Weavers (silk).....	do.....	.154	.322	.353
4. Weavers (cotton).....	do.....	.155	.364	.352
5. Fitters (boot and shoe).....	do.....	.195	.336	.350
6. Weavers (cotton).....	Time.....	.190	.347	.342
7. Reelers, winders, and spoolers (wool).....	Piece.....	.172	.314	.331
8. Spinners (cotton).....	do.....	.141	.306	.323
9. Spinners (wool).....	do.....	.157	.320	.315
10. Carders (cotton).....	do.....	.161	.303	.310
11. Spoolers, warpers, and twisters (cotton).....	do.....	.150	.288	.302
12. Upper leather cutters (boot and shoe).....	Time.....	.173	.271	.296
13. Drawers (wool).....	do.....	.146	.256	.296
14. Warpers (silk).....	Piece.....	.146	.262	.294
15. Carders (wool).....	Time.....	.137	.296	.291
16. Spinners (cotton).....	do.....	.135	.278	.289
17. Reelers, winders, and spoolers (wool).....	do.....	.129	.277	.283
18. Spinners (wool).....	do.....	.136	.295	.281
19. Finishers (wool).....	do.....	.176	.274	.280
20. Finishers and cuttermen (paper).....	do.....	.142	.271	.276
21. Fitters (boot and shoe).....	do.....	.181	.233	.272
22. Rag sorters (paper).....	do.....	.131	.274	.270
23. Drawers (cotton).....	do.....	.139	.276	.269
24. Spoolers (cotton).....	do.....	.134	.233	.268
25. Winders (silk).....	Piece.....	.129	.229	.268
26. Rag sorters (paper).....	do.....	.142	.318	.257
27. Winders (silk).....	Time.....	.154	.230	.248
28. Unskilled laborers (cotton).....	do.....	.130	.254	.237
29. Carders (cotton).....	do.....	.117	.218	.237
30. Quillers (silk).....	do.....	.112	.200	.221

Wages of Women in Hotels and Restaurants in the District of Columbia.¹

A SURVEY of the wages paid to women in hotels and restaurants, apartment houses, and hospitals in the District of Columbia, was made during the months of June, July, and August, 1919, by agents of the District Minimum Wage Board. Transcripts of the pay rolls were obtained, for the week or half month or month preceding the visit, from 193 establishments, including 50 hotels, 135 restaurants, 5 apartment houses, and 3 hospitals. A total of 2,209 women were employed in these establishments, distributed as follows: 1,010, or 46 per cent, in hotels; 1,055, or 48 per cent, in res-

¹ Wages of women in hotels and restaurants in the District of Columbia. District of Columbia Minimum Wage Board, Washington, Oct. 10, 1919. 23 pp. Bulletin No. 3.

taurants; 130, or 6 per cent, in hospitals; 14, or 0.6 per cent, in apartment houses. Employees in practically all the manual and clerical positions open to women, except those in the laundry, were included in the survey.

Three important characteristics of the hotel and restaurant business were found to influence the money wage received by women employees. First among these is the unsteadiness of employment. Of the 153 women on the pay rolls of three hotels, 68, or 44 per cent, worked less than a full month. Of the 127 women on the pay rolls of two other hotels, 49, or 39 per cent, worked less than a full half month. Assuming that the same number in this latter group would have failed to work the full pay period in the other half month, 98, or 77 per cent of this group would have worked less than a full month. Such irregular attendance and constant shifting from job to job makes earnings considerably less than rates of pay and this difference must be borne in mind in considering the analysis of the wage rates.

The second factor influencing wages is the tips received by maids, elevator operators, and waitresses. Reports as to the amount received in tips were secured by the board from women in these occupations. Tips reported to be received by elevator operators—averaging about 35 cents a week—are too small to affect earnings. Eight maids stated that they received no tips, seven stated the amount to be "very little," and the average for those giving actual figures was \$1.22 a week. This again is too small an amount to make any appreciable addition to wages. Very few waitresses are employed in hotels other than in the help's dining room, where practically no tips are given. The average tips received by waitresses in restaurants was \$4.62 a week. As the waitresses were found to be among the best paid employees, the generally low wages of the women are not offset by the value of tips.

The third factor influencing wages is the prevalence in this industry of other than money compensation. Of the 2,209 women, 6 per cent received room and meals, 65 per cent received three meals a day, 9 per cent received two meals a day, 3 per cent received one meal a day, and 17 per cent received only a money wage. For the purpose of ascertaining the value in money of the total wage, including such additional compensation, the Board assumed the cost of board as \$6 a week and of room as \$3 a week. These figures were arrived at from the minimum cost of board and room for a self-supporting woman in the mercantile trades set by the recent Mercantile Wage Conference. These figures are considerably higher than the estimated cost of furnishing such board and room, as given

by the hotel managers. They are higher than the actual value of the room or board, or both, tendered the employee in lieu of wages, because the employee's hours may be so arranged that only two meals instead of the three allowed can be secured conveniently, or she may have to provide her own meals on the seventh day each week, if she works a six-day week, or she may, as several stated they did, find the meals provided by the hotel unpalatable. As these figures are the only actual figures available, however, the report allows as the money value of room and meals \$9 a week for room and board, \$6 for three meals a day, and a proportionate amount where less than three meals per day were received.

Analysis of the Wage Situation.

All wage material is presented in the report separately for groups of employees according to the amount allowed them in room and meals, so that the total money value of the wages received by all groups may be compared with exactness. Wages in hotels are usually based on a monthly rate. In order to make these rates comparable to those paid by the week in restaurants and other industries, these monthly rates have been reduced to weekly rates by multiplying them by 12 and then dividing by 52.

The wage situation in the hotel industry is summed up in the following table:

NUMBER AND PER CENT OF WOMEN EMPLOYED IN HOTELS CLASSIFIED BY RATE OF WAGES PER WEEK AND BY ROOM AND MEALS ALLOWED PER DAY.

Number.

Compensation in addition to wages.	Woman employees whose rates of wages per week were—											Total.
	Under \$7.	\$7 and under \$8.	\$8 and under \$9.	\$9 and under \$10.	\$10 and under \$11.	\$11 and under \$12.	\$12 and under \$13.	\$13 and under \$14.	\$14 and under \$15.	\$15 and under \$16.	\$16 and over.	
Room and three meals.....	66	4	9	5	2	1	1	6	.....	1	6	101
Three meals.....	132	7	46	155	59	42	14	29	1	14	25	524
One meal.....	8	.....	4	.....	.....	2	.....	.....	.....	1	4	19
Nothing.....	15	8	57	169	23	11	4	15	.....	8	56	366
Total.....	221	19	116	329	84	56	19	50	1	24	91	1,010

Per cent.

Room and three meals.....	65.3	4.0	8.9	5.0	2.0	1.0	1.0	5.9	.....	1.0	5.9	100
Three meals.....	25.2	1.3	8.8	29.6	11.2	8.0	2.7	5.5	0.2	2.7	4.8	100
One meal.....	42.1	.....	21.1	.....	.....	10.5	.....	.....	.....	5.2	21.1	100
Nothing.....	4.1	2.2	15.6	46.2	6.3	3.0	1.1	4.1	.....	2.1	15.3	100
Total.....	21.9	1.9	11.5	32.6	8.3	5.5	1.9	4.9	.1	2.4	9.0	100

This table shows that 65 per cent of the women receiving room and board in addition to wages were paid less than \$7 a week; 65 per cent of those receiving three meals a day were paid less than \$10 a week; 68 per cent of those receiving only a money wage were paid less than \$10 a week, 77 per cent less than \$12 a week, and only 15 per cent \$16 or over.

The next table shows wage conditions among restaurant employees.

NUMBER AND PER CENT OF WOMEN EMPLOYED IN RESTAURANTS, CLASSIFIED BY RATE OF WAGES PER WEEK AND BY MEALS ALLOWED PER DAY.

Number.

Compensation in addition to wages.	Woman employees whose rates of wages per week were—											Total.
	Under \$7.	\$7 and under \$8.	\$8 and under \$9.	\$9 and under \$10.	\$10 and under \$11.	\$11 and under \$12.	\$12 and under \$13.	\$13 and under \$14.	\$14 and under \$15.	\$15 and under \$16.	\$16 and over.	
Three meals.....	13	37	142	72	158	18	224	14	69	35	43	825
Two meals.....	42	26	44	14	10	16	23	5	5	2	9	195
One meal.....	18	5	7	2	1				1			34
Total.....	73	68	193	88	169	34	247	19	75	37	52	1,055

Per cent.

Three meals.....	1.6	4.5	17.2	8.7	19.1	2.2	27.1	1.7	8.3	4.2	5.2	100
Two meals.....	21.4	13.3	22.4	7.1	5.1	8.2	11.7	2.5	2.5	1.0	4.6	100
One meal.....	52.9	14.7	20.6	5.9	2.9				2.9			100
Total.....	6.9	6.5	18.3	8.4	16.0	3.2	23.4	1.8	7.1	3.5	4.9	100

The wage situation in the restaurant industry may be summarized as follows: Of the women receiving three meals a day 32 per cent were paid less than \$10 a week, and 78 per cent of those receiving two meals a day were paid less than \$12 a week. The one-meal figures are not comparable, since most of the women in that group work only part time.

Comparing these figures with those presented for the hotel industry, it will be seen that the wage rates prevailing in the restaurants of the District were considerably higher than those found in the hotels.

Hospitals were classed with hotels and restaurants in this study, because the women employed in hospitals, exclusive of the nurses, perform work very similar to that performed by women employed in hotels. Of the 130 women working in hospitals, 28 per cent received room and three meals, 69 per cent received three meals, and 2 per cent one meal a day in addition to their money wage. Over

half, 54 per cent, of the women receiving room and meals were paid less than \$7 a week, and of those receiving board alone, 97 per cent were paid less than \$10 a week.

It was found that the average apartment house employs few women, the most general occupations being telephone and elevator operating. The 14 women for whom data were collected received a straight money wage and all of them were paid less than \$14 a week. Wage conditions were, therefore, found to be worse in hospitals and apartment houses than in hotels and restaurants.

Using the estimates of the value of room and board accepted as a working basis, it is found that of the 2,209 women employed in this industry 72 per cent of those employed in hotels, 43 per cent in restaurants, 82 per cent in hospitals, and 100 per cent in apartment houses were receiving less than \$16 a week or its equivalent. A further analysis of the wages of all the women reveals striking differences between the wages of those receiving a straight money wage and those receiving a money wage supplemented by room and meals. Those who received only a money wage were the poorest paid, 85 per cent of them receiving less than \$16 a week. On the other hand, the best paid women were those in the three-meal group, only 48 per cent of them receiving less than the \$10, which, when board is provided, has been considered as equivalent to \$16 a week. The women receiving both room and board were between these two groups, 62 per cent being paid less than \$7 per week, the figure estimated as the equivalent of a \$16 money wage. This difference between the real wages of the group receiving only a money wage and of the groups receiving room or meals or both can not be accounted for on an occupational basis, for it applies within each occupation as well as to the whole industry.

It seems evident from the figures presented in the report that a "substantial number of woman employees" in hotels, restaurants, hospitals, and apartment houses "are receiving wages inadequate to supply them with the necessary cost of living and maintain them in health and protect their morals."

Cost of Living in Relation to Wage Adjustments.

THE adjustment of wages to the cost of living has been effected in some instances in a somewhat haphazard way by applying to local conditions the results of surveys of cost of living covering communities far distant or giving a composite of the country as a whole. In comparatively few instances have wages been increased as the result of the careful and scientific study of prices and living costs in the immediate vicinity of the plant, which after all

determine the expenditures of the employees whose wage scales are to be adjusted.

How one firm employing more than 1,000 people set about to determine the increase in the cost of living as affecting its own employees immediately and then to make a wage adjustment that should adequately compensate for the increase, is described in some detail in an article on cost of living in relation to wage adjustments published in the Bulletin of the Taylor Society (New York) for October, 1919 (pp. 29 to 46). The purpose of the investigation was to set up and adopt a standard method for readily making comparisons in the cost of living from year to year and to determine the relative percentage of increase, with this percentage as a guide, to ascertain whether or not the advance in the daily earnings of the various classes of workers has shown the same relative per cent of increase as has the cost of living, and then, if classes have not been advanced proportionately, to adjust the rates for such classes to the extent due them as determined by the findings.

The management took the position that an educational campaign was necessary to bring employees to realize that production is the only possible remedy for scarcity of goods, which in turn is the reason for high prices, and that any interference with production by strike or otherwise merely aggravates the trouble and results in intensifying the very condition against which they protest. To quote from the report:

There is no better place to begin such a campaign than in our own factories and among our own workmen, and it is plainly up to the management to take the initiative. This means a careful analysis of the wage conditions, due regard being given to the current purchasing power of the dollar, and practical application of our findings to the solution of our own problem. We believe it fair and practical to "give more in order to get more," and in the recognition of the relative increase in living cost, as compared with the relative increase in wages in any given period, we are only laying the foundation for better conditions and better relations between men and management, which in turn will lead to the ultimate end of maximum production from any given set of conditions or facilities; and for the coincident results, such as maximum wages, minimum costs, low labor turnover, equitable profits on capital invested, and mutual success and satisfaction to all concerned, viz, the worker, the manager, the owner, and the community of which these three are members.

If we do not recognize this factor in our wage relations, then we are bound to pay for it one way or another. Briefly, when an individual finds his income does not permit him to maintain the standards of living to which he has been accustomed (to say nothing of reaching the higher standards which human nature inherently desires as men advance in years) he soon gets into a frame of mind where he is torn between (a) lowering his standards of living by omitting certain articles of diet—making the old suit last another year, moving to cheaper quarters, or practicing other economies or substitutions—and (b) "hitting the boss for a raise."

It seems that the individual does not let himself be "torn" very far in either direction. He quickly acts in the direction of (b), and if the answer is not favorable or not promptly given, individual dissatisfaction soon arises, and like the proverbial bad apple in a barrel of otherwise good ones, he soon contaminates the others. The manager soon sees an element of unrest increasing; strikes may, and in fact do follow, as witnessed by the hundreds of them occurring of late, all of which have had as their motive, or at least a part of that motive, the "recognition in wages of the increasing cost of living." Why then, should we overlook the obvious, or dodge the inevitable? Should we not expect to meet the increasing cost of labor as we do the increasing cost of raw materials by providing in the selling price of our respective products a suitable margin for increased labor costs, which in the main will, and do result, more from increased cost of living than from any other cause?

The questionnaire prepared for the purpose of obtaining from the employees their actual standard of living was sent to 280 workers equally divided among unskilled, skilled, and highly skilled. Only 15 per cent were returned completely filled out, and 33.4 partially filled out. The computations are based on the average family of five—father, mother, two boys aged 15 and 9, respectively, and a girl aged 7—this family consisting of 3.6 adult males as measured by well-known dietary standards.¹

The report goes into considerable detail in presenting the results of the survey. It is stated that an examination of the questionnaire showed that the same articles used in the same quantity by the standard family of five in the years 1913, 1915, 1917, 1918, and 1919 could be purchased in 1913 for \$4.06 per day and in May, 1919, for \$7.39 per day, an increase of 81.6 per cent in daily living cost. This per cent of increase was accordingly adopted as the basis upon which to make the wage adjustment. The following table is compiled from the tabulations in the report. It shows the relative daily living costs for 1913, 1915, 1917, 1918, and to May, 1919, with per cent of increase in 1919 over 1913.

RELATIVE DAILY LIVING COSTS IN 1913, 1915, 1917, 1918, AND TO MAY, 1919.

Item.	1913	1915	1917	1918	1919 ²	
					Daily cost.	Per cent increase over 1913.
Food.....	\$1.9534	\$2.2538	\$3.1025	\$3.5164	\$3.8939	99.3
Clothing.....	1.205	1.328	1.65	2.125	2.336	93.9
Fuel.....	.353	.364	.363	.483	.463	31.2
Shelter.....	.555	.556	.597	.659	.691	21.5
Total.....	4.0664	4.5018	5.7125	6.7835	7.3839	81.6

¹ See 18th annual report of the U. S. Commissioner of Labor, 1903, p. 102.

² To May, 1919.

In compiling the data on actual wages paid, the management included only factory departments and classified these into productive and nonproductive labor. The daily wages for each department were obtained by going through the pay roll for each year and securing the daily earnings for each representative class or group of work in that department. In this manner wages were found for both productive and nonproductive labor and the per cent increase computed for each year concerned. The two classes of labor were then combined and the average daily earnings computed for the years 1913, 1915, 1917, 1918, and to May 28, 1919. Percentage increases for these years were then computed and used in the comparisons with the increased cost of living in the same years. As a result it was found that the average wages in all departments rose from \$2.48 in 1913 to \$4.15 in 1919 prior to May 28, or 67.1 per cent.

RELATIVE DAILY RATES OF WAGES IN 1913, 1915, 1917, 1918, BEFORE AND AFTER THE WAGE ADJUSTMENT OF MAY 28, 1919.

Item.	1913	1915	1917	1918	Before adjust- ment of May 28.	1919	
						After adjustment of May 28.	
						Amount.	Per cent of increase over 1913.
Productive labor.....	\$2.44	\$2.53	\$3.03	\$3.27	\$4.00	\$4.37	79.1
Nonproductive labor.....	2.53	2.49	3.07	3.35	4.31	4.46	76.3
Both classes.....	2.48	2.51	3.05	3.31	4.15	4.41	77.7

Governed thus by an increase in the cost of living of 81.6 per cent and an increase in wages of 67.1 per cent, it was apparent that an adjustment was due which would bring the current daily wages into the same relation with the daily cost of living in 1919 as prevailed in 1913. The management thereupon decided to put through a wage advance in recognition of this discrepancy as shown by 81.6 per cent increase in the cost of living and 67.1 per cent increase in wages for the same period.

Although it developed that some classes of labor had advanced more than others during the period since 1913, it was decided to make no discrimination, and a wage advance varying from 2½ cents to 8 cents per hour on all classes of labor was put into effect.

The report states that in the adjustment the margin of difference between 81.6 per cent and 67.1 per cent, namely, 14.5 per cent, was cut to 3.9 per cent. That is, the increase in the wages after adjustment was 77.7 per cent as against 67.1 per cent before the adjustment. This difference of even 3.9 per cent was not intentional, it is

declared, for all classes of labor were brought up 81 per cent or better from the prevailing 1913 daily wage.

But when averaging the individual rates for each man in a department, and then averaging these composite rates for all departments, the new scale ranging from \$3.60 (or $\$0.45 \times 8$ hours) minimum, to \$7.20 (or $\$0.90 \times 8$ hours) maximum, gave, when weighted by the number of men receiving these rates (or those in between a new average of \$4.41, and this is 77.7 per cent higher than the average of \$2.48 for all classes in 1913. The next wage adjustment involving recognition of cost of living will, we intend, make up for this slight deficiency, for we will have the benefit of this research to increase the accuracy of our aim. Further, there was not the same number of men in each department in 1913 as in 1919, and this variation further accounts for the variation in the weighted average of daily earnings for the two years 1913 and 1919, respectively, i. e., there was a proportionately greater number of low-rated men in the 1919 average than in the 1913 average, and that has had its effect in reducing the average wage for 1919, although all classes of labor have as "classes" the same relative increase of 81.6 per cent over their 1913 average daily wages.

The result of this voluntary action on the part of the management is briefly summed up in the report in the following words:

(1) The majority of our men when they received this raise, and knew the circumstances under which it was given, were highly pleased with the company's attitude. Many of them expressed their personal satisfaction to their foremen, to their fellow workers, and to their friends in neighboring plants.

(2) It further established their faith in the watchfulness of the management over the conditions affecting the workers, and showed the workers that it was not necessary for them to resort to the prevalent methods of securing attention or recognition.

(3) It paved the way for further action on the part of the management in its work of installing scientific management principles to the operation of the business, and through this practical demonstration of the interpretation of Taylor's statement that the "principal object of management should be to secure the maximum prosperity for the employer, coupled with the maximum prosperity for each employee," our men have taken hold in a hearty manner and are assisting in many ways to achieve the ideals so admirably set forth in Taylor's Principles of Scientific Management.

* * * * *

The cost of this increase, as distributed over our annual production, will be relatively insignificant, for while this wage increase averaged 0.0364 cents per hour applied to each of 1,184 men, or, expressed otherwise, it was approximately 10 per cent increase in its net effect on our annual pay roll, we can see wherein the reduction of wasted effort and the practice of other economies as the result of improved methods of management will more than compensate for this increase.

But this is not the end of it all! By standardizing our method, and by semiannual or quarterly review of the changing prices, we will continue to make adjustments in recognition of the cost of living whenever conditions warrant such action. In other words, it will be treated as a perfectly proper and legitimate factor in our business affairs.

Increases in Pay of Policemen in the District of Columbia.

EARLY in December, 1919, Congress passed a bill granting the policemen of the District of Columbia an increase in their basic compensation. This bill was approved and became law on December 5. The act (Public No. 94) is the final result of much investigating and discussion by Congress and is of special interest by reason of the circumstances which surrounded its passage.

For a considerable length of time an agitation had been going on to increase the salaries of the policemen of the District of Columbia. Owing to the delay of Congress to act, the policemen, who were organized, affiliated their organization with the American Federation of Labor. The policemen's organization had a constitution prohibiting them from striking. A controversy immediately arose between the policemen and the District of Columbia Commissioners, who were opposed to this affiliation. This controversy attracted little attention in Congress until the police of Boston, who were similarly organized and affiliated, went on a strike in spite of their constitutional prohibition and left that city defenseless against looting mobs. This, bringing the matter to the attention of Congress, hastened action on the bill and also led finally to the amendment of paragraph No. 9. By this paragraph, as amended, the policemen are forbidden to become members of, or affiliated with, any organization that uses the strike as a means of settling controversies. This section, as amended, reads as follows:

PAR. 9. No member of the Metropolitan police of the District of Columbia shall be or become a member of any organization, or of an organization affiliated with another organization, which itself, or any subordinate, component, or affiliated organization of which holds, or claims, or uses the strike to enforce its demands. Upon sufficient proof to the Commissioners of the District of Columbia that any member of the Metropolitan police of the District of Columbia has violated the provisions of this section it shall be the duty of the Commissioners of the District of Columbia to immediately discharge such member from the service.

Any member of the Metropolitan police who enters into a conspiracy, combination, or agreement with the purpose of substantially interfering with or obstructing the efficient conduct or operation of the police force in the District of Columbia by a strike or other disturbance shall be guilty of a misdemeanor and upon conviction shall be punished by a fine of not more than \$300 or by imprisonment of not more than six months, or by both.

No officer or member of the said police force, under penalty of forfeiting the salary or pay which may be due him, shall withdraw or resign, except by permission of the Commissioners of the District of Columbia, unless he shall have given the major and superintendent one month's notice in writing of such intention.

In the Senate it was sought by the so-called Meyer's amendment to extend the provisions of this paragraph to all organizations of Government employees, but this failed to secure the approval of the House, and the measure was finally passed without the amendment.

The act is an amendatory act, amending chapter 623 of the Acts of 1901 as amended by chapter 3056 of the Acts of 1906. Paragraph 2 of the original act is amended so as to place the policemen under the provisions of the civil-service laws. The provisions having to do with the classification of privates were also altered. There will be three classes for privates as formerly, but the periods of service in the respective classes are changed so that after one year's efficient service privates in class 1 are automatically promoted to class 2, and, after two years' efficient service in class 2, they are automatically promoted to class 3, which is the highest class for privates.

Paragraph 8 of the original act fixes the basic salaries of the members of the entire police force. This paragraph was amended by the new act, increasing the salaries of all the policemen from privates of the first or lowest class to the major and superintendent. One of the features of this paragraph is that its provisions are made retroactive from August 1, 1919. In the appropriation bill (Public No. 6), of July 11, 1919, making appropriations for the District of Columbia, temporary increases were made in the salaries of the members of the police force, so that the present increases are not so great as they appear to be when compared with the basic salaries as fixed in 1906. In addition to the increased salaries allowed by this act the policemen also receive the \$240 annual bonus allowed to District and Federal employees. The basic salaries of 1906, the temporary salaries of the appropriation act of July 11, 1919, and the new basic salaries as fixed by the present act, together with the present salaries plus the bonus, and the accumulated retroactive pay figured on a basis of 4½ months are shown in the following table, which also shows the changes made by this law in the salaries of the park watchmen who are henceforth to be known as the park police. The park police are Federal employees as distinguished from District of Columbia employees and constitute no part of the Metropolitan police force of the District of Columbia.

COMPENSATION OF THE METROPOLITAN POLICE AND PARK POLICE OF THE DISTRICT OF COLUMBIA.

Position.	Salary under law of—				
	1906 ¹	July 11, 1919. ²	December 5, 1919.		
			Basic salary. ³	Including bonus of \$240.	Retroactive accruals in pay. ⁴
Major and superintendent.....	\$4,000	\$4,000	\$4,500	\$4,500	\$173.61
Assistant superintendents.....	2,500	2,500	3,000	3,000	173.61
Inspectors.....	1,800	2,000	2,400	2,640	138.89
Police surgeons.....	600	840	1,600	1,840	263.89
Captains.....	1,500	2,000	2,400	2,640	138.89
Lieutenants.....	1,320	1,600	2,000	2,240	138.89
Sergeants.....	1,250	1,400	1,800	2,040	190.97
Privates, Class 3.....	1,200	1,320	1,660	1,900	118.05
Privates, Class 2.....	1,080	1,200	1,560	1,800	125.00
Privates, Class 1.....	900	1,080	1,460	1,700	131.94
Park police:					
Lieutenant.....		\$1,200	1,900	2,140	243.05
First sergeant.....		\$950	1,700	1,940	260.42
Sergeants.....		\$900	1,580	1,820	236.11
Privates.....		\$840	1,360	1,600	180.55

¹ Chapter 3056, Acts of 1906.² Public No. 6, July 11, 1919.³ Public No. 94, Dec. 5, 1919.⁴ On basis of 4½ months, Aug. 1 to Dec. 5, 1919.⁵ Employees receiving more than \$2,500 per year are not allowed the bonus.⁶ Under Public No. 314, Mar. 1, 1919.

The extra allowances made to policemen of the Metropolitan police force who are mounted on horses, motor vehicles, or bicycles are also increased. The following table gives the amount of these increases:

EXTRA ALLOWANCES FOR SPECIAL SERVICE OF METROPOLITAN POLICE OF THE DISTRICT OF COLUMBIA.

Service.	Allowance under law of—			
	1906 ¹	July 11, 1919. ²	Dec. 5, 1919. ³	Retroactive accrual in pay. ⁴
Mounted on own horse.....	\$240	\$480	\$540	\$20.83
Mounted on own motor vehicle.....	(⁵)	360	480	41.67
Mounted on bicycle.....	50	60	70	3.47

¹ Chapter 3056, Acts of 1906.² Public No. 6, July 11, 1919.³ Public No. 94, Dec. 5, 1919.⁴ On basis of 4½ months, Aug. 1 to Dec. 5, 1919.⁵ None.

Increases in British Army Pay.¹

UNDER the provisions of two royal warrants issued as army orders on September 13, new rates of pay, half pay, and retired pay for officers, and increases in the pay and pension of soldiers are established.

In the case of officers the new rates of pay, which operate as from July 1, 1919, are granted in consideration of the present high cost of living and will be subject, after five years, to revision, either upward or downward, to an extent not exceeding 20 per cent, according as the cost of living rises or falls. After July 1, 1924, a further revision may take place every three years. These provisions do not apply to other ranks.

During the war increases in rates of pay were granted at various dates. In the following table, however, the rates in force at August, 1914, and immediately prior to the operation of the new scales only are given for comparative purposes. It should be noted, however, in considering the comparison, that prior to the recent changes, captains, lieutenants, and second lieutenants received allowances of £2 [\$9.73] a month for each child (up to a maximum of four) and majors received a similar allowance of £1 [\$4.87] a month. These allowances were not in operation at August, 1914, and they will cease as from January 1, 1920.

RATES OF PAY AND AMOUNT OF ALLOWANCES OF CERTAIN OFFICERS IN THE BRITISH ARMY AT AUGUST, 1914, JUNE, 1919, AND JULY, 1919.²

Rank and date. ³	Regimental pay (per day) ⁴	Lodging, light, and fuel allowance (per day).	Ration and messing allowance (per day).	Total, including command pay for lieutenant colonel (per day).
Lieutenant colonel:				
August, 1914.....	\$5.60	\$1.26	.....	\$8.07
June, 1919.....	6.93	\$1.28- .55	\$0.51	\$9.94- .55
July, 1919.....	11.56	2.07- 1.30	.51	16.57 or 15.67
Major:				
August, 1914.....	3.89	.91- .30	.08	4.89- .30
June, 1919.....	5.60	.95	.59	7.14
July, 1919.....	7.66	2.07 or .95	.51	10.24 or 9.12
Captain:				
August, 1914.....	2.82	.65	.08	3.55
June, 1919.....	4.38	.67	.59	5.64
July, 1919.....	5.72	2.07 or .67	.51	8.29 or 6.89
Lieutenant:				
August, 1914.....	1.58	.59	.08	2.25
June, 1919.....	3.77	.61	.59	4.97
July, 1919.....	3.89	1.58 or .61	.51	5.98 or 5.01
Second lieutenant:				
August, 1914.....	1.28	.59	.08	1.95
June, 1919.....	3.41	.61	.59	4.60
July, 1919.....	3.16	1.58 or .61	.51	5.25 or 4.28

¹ From The Labour Gazette (London), October, 1919, p. 420.

² Conversions in this and the following table are made on the basis of £1=\$4.867.

³ The rates quoted are the initial rates for each rank. In most cases officers received higher rates after certain periods of service.

⁴ Including, at June, 1919, the bonus paid to all officers who had not been released by 1st May.

The new warrant provides for lodging, light, and fuel allowances for married officers at higher rates than for those unmarried, and also grants furniture allowance to married men. In the above table, where two rates are quoted for July, 1919, the higher rate applies to married men and includes furniture allowance; the lower rate applies to unmarried men. As regards ration and messing allowances, no ration allowance was paid at August, 1914, but rations were allowed to those serving abroad; a messing allowance was paid, but this has been discontinued as from July, 1919.

The revised rates of pay for warrant officers, noncommissioned officers, and men also date from July 1, 1919, and it is provided that, where transfer to the new rates involves a loss of emoluments, the soldier may continue to receive his old rates until circumstances render them equal to or less than the new rates.

The following table shows a comparison between the new rates of pay for certain ranks in infantry regiments and those at the outbreak of war and at June, 1919:

RATES OF PAY FOR CERTAIN RANKS IN INFANTRY REGIMENTS IN THE BRITISH ARMY AT AUGUST, 1914, JUNE, 1919, AND JULY, 1919.

Rank.	Regimental pay per day.			Proficiency pay per day (if qualified).		
	Aug., 1914.	June, 1919. ¹	July, 1919.	Aug., 1914. ²	June, 1919. ³	July, 1919. ⁴
Regimental sergeant major....	\$1.22	\$2.01	\$3.41	\$0.12	\$0.12	.....
Regimental quartermaster sergeant.....	.97	1.64	2.92	.12	.12	.....
Company sergeant major.....	.97	1.04	2.43	.12	.12	.....
Company quartermaster sergeant.....	.85	1.52	2.31	.12	.12	.....
Sergeant.....	.57	1.12	1.70	.12	.12	.....
Corporal.....	.41	6.91	1.22	\$0.06 or .12	\$0.06 or .12	\$0.12
Private.....	.24	5.73	6.67	.06 or .12	.06 or .12	.12

¹ Including bonus paid to all soldiers who had not been released by 1st of May, but excluding war pay of 1d. (2 cents) per day for each year's service since Aug. 4, 1914.

² After 2 years' total service.

³ After 6 months' total service.

⁴ After 1 year's total service.

⁵ The nominal rates at June, 1919, were 3s. 8d. (89 cents) for corporals and 2s. 9d. (67 cents) for privates; but it was provided that no corporal should actually receive less than 3s. 9d. (91 cents), and no private less than 3s. (73 cents). Where proficiency pay was earned, 1d. or 3d. (2 or 6 cents), respectively, of this pay was merged into the rates of 3s. 9d. (91 cents) and 3s. (73 cents).

⁶ 3s. 6d. (85 cents) after 2 years' service.

In addition to the increases in pay, there have also been additions to the separation allowances. In August, 1914, the allowance for a wife for sergeants, corporals and privates was 7s. 7d. (\$1.85) per week with an additional 1s. 2d. (28 cents) per week for each child. In June, 1919, the allowance for a wife was 15s. (\$3.65) for sergeants, and 12s. 6d. (\$3.04) for corporals and privates, with extra allowances of 10s. 6d. (\$2.56) for the first child, 8s. (\$1.95) for the second, 5s. 6d. (\$1.34) for the third, and 4s. (\$0.97) for each additional child. This scale remains in operation under the new warrant, but it is subject to revision on January 1, 1920.

Standard Rates of Pay of Officers and Crews of Italian Merchant Marine.

Translated by ALFRED MAYLANDER.

LA Vita Marittima e Commerciale¹ reports the results of a collective agreement concluded by Italian shipowners and the Seamen's Federation (*Federazione dei Lavoratori del Mare*). The agreement which became effective July 1, 1919, fixes standard rates of pay, hours of labor, and working conditions of the navigating and engineer officers, surgeons, pursers, petty officers, seamen, carpenters, cooks, bakers, stewards, etc., of the Italian merchant marine. The principal results of the agreement are reproduced below in the tables and annotations to the tables.

Steamships.

Officers.

The following two tables show the standard monthly rates of the basic pay, bonuses, clothing, entertainment, and active sea service allowances, pension-fund contributions, and wage increases of officers in the passenger and cargo service of transatlantic and subsidized steamship lines and of those in the cargo service of independent shipowners.

¹ La Vita Marittima e Commerciale, August, September, and October, 1919. Genoa.

STANDARD MONTHLY RATES OF PAY (IN LIRE¹) OF OFFICERS OF ITALIAN TRANSATLANTIC AND SUBSIDIZED STEAMSHIP COMPANIES, AND OF OFFICERS IN THE CARGO SERVICE OF INDEPENDENT SHIPOWNERS, EFFECTIVE JULY 1, 1919.

Transatlantic Companies.

Class of vessel and occupation.	Gross tonnage.	Basic salary.	Contribution to pension fund.	Clothing and entertainment allowance.	Bonuses.				Increase granted by the Royal Maritime Commission, effective July 1, 1919.	Total.	Active sea-service allowance.	Grand total.
					Borne by the ship-owner.	Borne by the Government on requisitioned vessels, on others by the ship-owners.						
						Cost of living.	War risk.	Cost of living. Forfeiture of shore leave.				
<i>Passenger liners.</i>												
Captain, chief engineer.....	Over 10,000....	1,000	75.00	20	150	50	50	150.00	120	1615.00	120	1735.00
	Under 10,000....	800	60.00	20	150	50	50	120.00	120	1370.00	120	1490.00
First mate, first engineer, surgeon.	Over 10,000....	600	45.00	20	130	50	40	90.00	120	1095.00	100	1195.00
	Under 10,000....	500	37.50	20	130	50	40	75.00	120	972.50	100	1072.50
Second mate, second engineer.	Over 10,000....	400	30.00	20	130	50	40	60.00	120	850.00	100	950.00
	Under 10,000....	350	26.25	20	130	50	40	52.50	120	788.75	100	888.75
Third mate, third engineer.	Over 10,000....	250	18.75	20	130	50	40	37.50	120	666.25	100	766.25
	Under 10,000....	250	18.75	20	130	50	40	37.50	120	666.25	100	766.25
Chief purser.....	Over 10,000....	500	37.50	20	130	50	40	75.00	120	972.00	100	1072.00
	Under 10,000....	425	31.87	20	130	50	40	63.75	120	880.62	100	980.62
Second purser.....	Under 10,000....	200	15.00	20	130	50	40	30.00	120	605.00	100	705.00
<i>Cargo liners.</i>												
Captain, chief engineer.....	.....	650	48.75	20	150	50	50	97.50	120	1186.25	120	1306.25
First mate, first engineer.....	.....	450	33.75	20	140	50	40	67.50	120	911.25	100	1011.25
Second mate, second engineer.	.....	300	22.50	20	130	50	40	45.00	120	727.50	100	827.50
Third mate, third engineer.....	.....	200	15.00	20	130	50	40	30.00	120	605.00	100	705.00

Subsidized Companies.

<i>Passenger and cargo liners in the Mediterranean service.</i>													
<i>Italiana and Sicilia:</i>													
Captain—													
Group 1.....		575	43.12	30	120	100	50	86.25	120	1124.37	120	1244.37	90
Group 2.....		475	35.62	30	120	100	50	71.25	120	1001.87	120	1121.87	90
Chief engineer—													
Group 1.....		575	43.12	100	100	100	50	86.25	120	1094.37	120	1214.37	90
Group 2.....		475	35.62	100	100	100	50	71.25	120	971.87	120	1091.87	90
First mate, first engineer—													
Group 1.....		350	26.25	100	100	100	40	52.50	120	788.75	100	888.75	90
Group 2.....		300	22.50	100	100	100	40	45.00	120	727.50	100	827.50	90
Second mate, second engineer.		250	18.75	100	100	100	40	37.50	120	666.25	100	766.25	90
Third mate, third engineer.		200	15.00	100	100	100	40	30.00	120	605.00	100	705.00	90
<i>Marittima:</i>													
Captain—													
Group 1.....		575	43.12	30	120	100	50	86.25	120	1124.37	90	1214.37	90
Group 2.....		475	35.62	30	120	100	50	71.25	120	1001.87	90	1091.87	90

¹ Normally the value of the lira is 19.3 cents.

STANDARD MONTHLY RATES OF PAY (IN LIRE) OF OFFICERS OF ITALIAN TRANSATLANTIC AND SUBSIDIZED STEAMSHIP COMPANIES, ETC.—Concl.

Subsidized Companies—Concluded.

Class of vessel and occupation.	Gross tonnage.	Basic salary.	Contribution to pension fund.	Clothing and entertainment allowance.	Bonuses.				Increase granted by the Royal Maritime Commission, effective July 1, 1919.	Total.	Active sea-service allowance.	Grand total.
					Borne by the ship-owner.		Borne by the Government on requisitioned vessels, on others by the ship-owners.					
					Cost of living.	War risk.	Cost of living.	Forfeiture of shore leave.				
<i>Passenger and cargo lines in the Mediterranean service—Continued.</i>												
Chief engineer—												
Group 1.....		575	43.12		120	100	50	88.25	120	1094.37	90	1184.37
Group 2.....		475	35.62		120	100	50	71.25	120	971.87	90	1061.87
First mate, first engineer—												
Group 1.....		350	26.25		100	100	40	52.50	120	788.75	75	863.75
Group 2.....		300	22.50		100	100	40	45.00	120	727.50	75	802.50
Second mate, second engineer.		250	18.75		100	100	40	37.50	120	666.25	75	741.25
Third mate, third engineer.		200	15.00		100	100	40	30.00	120	605.00	75	680.00

Independent Owners.

<i>Ocean cargo service.</i>															
Captain, first engineer.....	Up to 4,500....	580			120	50	50	87.00	120	1007.00	120	1127.00			
	4,501 to 7,000....	615			120	50	50	92.25	120	1047.25	120	1167.25			
	Over 7,000.....	655			120	50	50	98.25	120	1093.25	120	1213.25			
First mate, second engineer.	Up to 4,500....	350			100	50	40	52.50	120	712.50	100	812.50			
	4,501 to 7,000....	380			100	50	40	57.00	120	747.00	100	847.00			
	Over 7,000.....	415			100	50	40	62.25	120	787.25	100	887.25			
Second mate, third engineer.	Up to 4,500....	220			100	50	40	33.00	120	563.00	100	663.00			
	4,501 to 7,000....	250			100	50	40	37.50	120	597.50	100	697.50			
	Over 7,000.....	275			100	50	40	41.25	120	626.25	100	726.25			
<i>Coastwise cargo service.</i>															
Captain, first engineer.....	Up to 4,500....	505			120	50	50	75.75	120	920.75	120	1040.75			
	4,501 to 7,000....	535			120	50	50	80.25	120	955.25	120	1075.25			
	Over 7,000.....	570			120	50	50	85.50	120	995.50	120	1115.50			
First mate, second engineer.	Up to 4,500....	305			100	50	40	45.75	120	660.75	100	760.75			
	4,501 to 7,000....	330			100	50	40	49.50	120	689.50	100	789.50			
	Over 7,000.....	360			100	50	40	54.00	120	724.00	100	824.00			
Second mate, third engineer.	Up to 4,500....	190			100	50	40	28.50	120	528.50	100	628.50			
	4,501 to 7,000....	215			100	50	40	32.25	120	557.25	100	657.25			
	Over 7,000.....	240			100	50	40	36.00	120	586.00	100	686.00			
<i>Mediterranean cargo service.</i>															
Captain, first engineer.....	Up to 1,500....	310			120	50	50	51.00	120	731.00	120	851.00			
	1,501 to 3,000....	355			120	50	50	53.25	120	748.25	120	868.25			
	Over 3,000.....	365			120	50	50	54.75	120	759.75	120	879.75			
First mate, second engineer.	Up to 1,500....	165			100	50	40	24.75	120	499.75	100	599.75			
	1,501 to 3,000....	195			100	50	40	26.25	120	534.25	100	634.25			
	Over 3,000.....	220			100	50	40	33.00	120	563.00	100	663.00			
Second mate, third engineer.	Up to 1,500....	(1)			100	50	40	.....	120	.....	100	.....			
	1,501 to 3,000....	(1)			100	50	40	.....	120	.....	100	.....			
	Over 3,000.....	(1)			100	50	40	.....	120	.....	100	.....			

¹ The basic salary for these grades is fixed by individual contract.

Notes Relating to All Shipping Lines.

War bonus for active sea service.—Officers are granted a daily war bonus amounting to 6 lire in the case of captains and chief engineers and to 5 lire in that of officers of lower rank for each day of actual navigation in all seas and while stopping in ports of the Adriatic and Ionic Seas and in those of the Aegean coast, Libya, the Red Sea, and of Italian Somaliland. The computation of this bonus is based on the assumption that under normal conditions a steamer navigates on an average of 20 days per month, with the exception of steamers of the subsidized companies Marittima and Italiana in the Mediterranean service, in the case of which 15 days is assumed to be the average number of days of actual navigation.

Infected ports.—If a steamer sails for ports officially pronounced infected and does not go into quarantine, its officers and crew are entitled to a bonus for the period beginning with the departure from the last port preceding the infected port and ending with the arrival in the next port. In the case of transatlantic and subsidized lines this bonus is to amount to 15 per cent of the basic pay and in the case of steamers of independent owners to 10 per cent.

Notes Relating to Transatlantic and Subsidized Lines.

Pension fund.—These companies contribute to the pension fund of each officer a sum equal to 7.5 per cent of his basic pay.

Profit sharing.—The navigating officers, engineers, and surgeons of passenger steamers are to receive a share of the steamer's receipts of every voyage and of the savings in the consumption of coal and lubricants. This share may not be less than 10 per cent of their basic pay. The pursers are to share in a somewhat greater measure in the savings in the commissary department.

Service premiums.—Ships' officers shall be entitled to a service premium of 10 per cent of their monthly basic pay for each five years of continuous service in the same grade. This provision shall be applicable to not more than four quinquennia. If in case of promotion the new salary, owing to the formerly drawn service premiums, is inferior to the salary received before promotion the promoted officer shall be entitled to the difference between the two salaries.

Service in a higher grade.—An officer intrusted with the duties of a higher grade than his own shall be entitled to the pay of the higher grade if he is employed on steamers of transatlantic companies, and to a bonus equivalent to three-fourths of the difference between his own pay and that of the higher grade if he is employed on steamers of subsidized companies.

Hours of service in port and at sea.—The hours of actual service of ships' officers shall be eight hours per day in offices on land as well as on board in port and at sea.

Overtime.—Work performed beyond the normal hours of service on Sundays, May 1, and all legal holidays shall be compensated at the rate of 1 lira per hour. Work performed in anchoring a ship or in weighing anchor on arrival and departure, in moving the ship while in port, in the loading and unloading of mail and baggage, in calculations of navigation, as well as all work performed in the interest of the safety of the ship, passengers, and cargo, shall not be considered as overtime work.

Night watch in port.—One navigating officer and one engineer must alternate in remaining on board nights and on holidays in case of possible emergency. These officers shall be entitled to 24 hours' leave, beginning at 8 a. m. of the day following the night watch, unless the commanding officer disposes differently for very serious reasons of service.

Annual leave.—If compatible with the exigencies of the service ships' officers shall be granted 20 days of annual leave. In case that for unforeseen service reasons the company should not be able to grant such leave the officer shall be entitled to extra pay for the days of leave lost. Extraordinary leave not in excess of three days shall not be deducted from the annual leave.

Disembarkment owing to disarmament.—Officers disembarked owing to the putting out of commission of their ship or for any other service reason shall hold themselves at the disposal of the company and shall be entitled to full pay and sustenance for the entire duration of their disembarkment. They shall, however, be obligated to render service on board or on land and in the localities determined by the company.

Sickness.—In case of sickness officers shall be entitled to full pay for the first six months, half pay for the next six months, and to one-third of their pay for further six months. If the sickness has been caused by the service, the officer shall in addition to full pay be entitled to sustenance up to his full recovery, but not for a period in excess of 18 months.

Industrial accidents.—If an officer becomes the victim of an industrial accident while in service, and consequent to such accident is discharged by the company he shall receive as compensation of all his claims arising from the accident a sum equal to four years' pay in case of permanent total disability and to two years' pay in case of permanent partial disability. If the accident is fatal, his surviving heirs (wife, descendants, ascendants, and collaterals up to the third

degree) shall receive a sum equivalent to four years of his pay as full compensation of all their claims.

First-class sustenance.—Captains, chief engineers, and surgeons shall be entitled to first-class sustenance.

Notes Relating to Transatlantic Companies Only.

Clothing allowance.—These companies grant to their officers a monthly clothing allowance of 20 lire.

Bonus for compilation of the pay roll.—The officer charged with the compilation of the pay roll and the paying of the crew receives a monthly bonus of 25 lire.

Notes Relating to Subsidized Companies Only.

Entertainment.—The captains of the subsidized companies Italiana, Marittima, and Sicilia receive a monthly allowance of 30 lire for entertainment.

Bonus for electric light service.—An allowance of 30 lire per month granted for electric light service shall be divided by the two engineer officers of lower grade.

Voyages beyond the Straits.—The following monthly bonuses are to be paid to officers of cargo steamers of the companies Italiana and Sicilia for voyages beyond the Straits:

Captain, chief engineer.....	125 lire.
First mate, first engineer.....	75 lire.
Second and third mate, second and third engineer.....	60 lire.

Officers of passenger and cargo steamers of the company Marittima are to receive the following bonuses for each voyage beyond the Straits:

	To Bombay.	To Benadir.
Captain, chief engineer.....	200 lire.	250 lire.
First mate, first engineer.....	100 lire.	140 lire.
Second mate, second engineer.....	50 lire.	90 lire.
Third mate, third engineer.....	40 lire.	60 lire.

As each steamer on an average makes four such voyages, the officers of steamers sailing beyond the Straits receive monthly about one-third of the bonus specified above.

Steamers stationed abroad.—On steamers stationed abroad officers are to receive the following monthly bonuses:

Captain, chief engineer.....	50 lire
First mate, first engineer.....	30 lire
Second mate, second engineer.....	20 lire
Third mate, third engineer.....	15 lire

Notes Relating to Independently Owned Steamers.

General.—The rates of pay shown in the table relate exclusively to officers with certificate of master of ocean steam vessels or of first engineer and are to remain in force as long as the standard freight rate from Cardiff to Genoa remains higher than 12 shillings in gold. The rate of pay of officers not possessing such certificates is to be fixed by individual agreement with the shipowner.

Hours of service in port.—The actual hours of service in port shall be eight hours per day during winter and nine hours during summer for deck officers as well as engineer officers.

Division of the watch.—During navigation the watch of the deck officers shall be divided into two turns and that of the engineer officers into three (4 and 8).

The watch of the deck officers shall begin after the vessel has left port and is in a condition satisfactory to the captain. That of the engineer officers shall begin with the firing of the boilers preparatory to departure.

Maintenance of auxiliary machinery.—During navigation the engineer officers shall perform the usual maintenance and repair work on winches and other auxiliary machinery.

Night watch.—One deck officer and one engineer officer shall alternate in staying on board nights and on holidays in case of possible emergencies.

Crew.

In the following tables are shown the standard rates of basic pay and all bonuses and allowances of all members of the crews of transatlantic and subsidized steamship lines and of those in the service of independent shipowners.

STANDARD MONTHLY RATES OF PAY (IN LIRE¹) OF MEMBERS OF THE CREWS
OF ITALIAN MERCHANT STEAMERS, EFFECTIVE JULY 1, 1919.

Transatlantic Companies.

Occupation.	Basic pay.	Bonuses.				In-crease granted by the Royal Maritime Commission, effective July 1, 1919.	Total.	Active sea-service allowance.	Grand total.
		Borne by the shipowner.		Borne by the Government on requisitioned vessels, on others by the shipowners.					
		Cost of living.	War risk.	Cost of living.	Forfeiture of shore-leave.				
Boatswain.....	160	90	40	30	40.00	110	470.00	50	520.00
Boatswain's mate.....	140	90	40	30	35.00	110	445.00	50	495.00
Carpenter ²	150	90	40	30	37.50	110	457.50	50	507.50
Carpenter's mate ²	130	90	40	30	32.50	110	432.50	50	482.50
Brazier.....	150	90	40	30	37.50	110	457.50	50	507.50
Quartermaster.....	125	90	40	30	31.25	110	426.25	50	476.25
Able seaman ³	110	90	40	30	27.50	100	397.50	20	417.50
Ordinary seaman:									
First class ³	75	90	40	30	18.75	70	323.75	20	343.75
Second class ³	70	90	40	30	17.50	70	317.50	20	337.50
Apprentice ³	50	90	40	30	12.50	70	292.50	20	312.50
Nurse, male:									
First class.....	110	90	40	30	27.50	100	397.50	20	417.50
Second class.....	100	90	40	30	25.00	100	385.00	20	405.00
Nurse, female:									
First class.....	100	90	40	30	25.00	100	385.00	20	405.00
Second class.....	90	90	40	30	22.50	100	372.50	20	392.50
Fireman, first leading.....	160	90	40	30	40.00	110	470.00	50	520.00
Fireman, leading.....	140	90	40	30	35.00	110	445.00	50	495.00
Machinist.....	150	90	40	30	37.50	110	457.50	50	507.50
Chief electrician.....	150	90	40	30	37.50	110	457.50	50	507.50
Electrician.....	130	90	40	30	32.50	110	432.50	50	482.50
Fireman ³	130	90	40	30	32.50	100	422.50	20	442.50
Trimmer.....	100	90	40	30	25.00	100	385.00	20	405.00
Chief steward.....	160	90	40	30	40.00	110	470.00	50	520.00
Second steward.....	100	90	40	30	25.00	100	385.00	20	405.00
Linen-room steward ⁴	100	90	40	30	25.00	100	385.00	20	405.00
Steward (cabin).....	85	90	40	30	21.25	100	366.25	20	386.25
Stewardess (cabin).....	80	90	40	30	20.00	100	360.00	20	380.00
Steward (dining room):									
First class.....	65	90	40	30	16.25	70	311.25	20	331.25
Second class.....	60	90	40	30	15.00	70	305.00	20	325.00
Cabin boy.....	50	90	40	30	12.50	70	292.50	20	312.50
Pantrymen:									
First class.....	120	90	40	30	30.00	100	410.00	20	430.00
Second class.....	85	90	40	30	21.25	100	366.25	20	386.25
Sales clerk.....	80	90	40	30	20.00	100	360.00	20	380.00
Second cook ⁶	140	90	40	30	35.00	100	435.00	20	455.00
Third cook.....	120	90	40	30	30.00	100	410.00	20	430.00
Chief baker.....	120	90	40	30	30.00	100	410.00	20	430.00
Second baker.....	110	90	40	30	27.50	100	397.50	20	417.50
Second pastry cook ⁶	100	90	40	30	25.00	100	385.00	20	405.00
Butcher.....	110	90	40	30	27.50	100	397.50	20	417.50
Chief storekeeper.....	120	90	40	30	30.00	100	410.00	20	430.00
Second storekeeper.....	100	90	40	30	25.00	100	385.00	20	405.00
Third storekeeper.....	85	90	40	30	21.25	100	366.25	20	386.25
Storekeeper for the crew.....	120	90	40	30	30.00	100	410.00	20	430.00

¹ Normally the value of the lira is 19.3 cents.

² Carpenters are entitled to a monthly allowance of 3 lire as compensation for the use of their own tools; which are to be insured for 300 lire at the expense of the shipping company.

³ Able seamen rated as steersmen, cargo watchmen, captain of the hold, as well as firemen, oilers, chief guards, and seamen and apprentices assigned to winches are entitled to a monthly bonus of 5 lire.

⁴ A linen-room steward is carried only on steamers with accommodations for more than 100 cabin passengers.

⁶ The wages of the chief cook and chief pastry cook are to be regulated by individual contract.

STANDARD MONTHLY RATES OF PAY (IN LIRE) OF MEMBERS OF THE CREWS OF ITALIAN MERCHANT STEAMERS, EFFECTIVE JULY 1, 1919—Continued.

Subsidized Companies.

Occupation.	Basic pay.	Bonuses.				In-crease granted by the Royal Maritime Commission effective July 1, 1919.	Total.	Active sea-service allowance.		Grand total in the Mediterranean Sea.	
		Borne by the ship-owner.		Borne by the Government on requisitioned vessels, on others by the ship-owners.				Italiana and Sicilia.	Maritima in the Mediterranean Sea.	Italiana.	Maritima.
		Cost of living.	War risk.	Cost of living.	Port-fu-ture of shore leave.						
Boatswain 1.....	150	90	40	30	37.50	110	457.50	50.00	37.50	507.50	495.00
Do. 2.....	140	90	40	30	35.00	110	445.00	50.00	37.50	495.00	482.50
Boatswain's mate.....	135	90	40	30	33.75	110	438.75	50.00	37.50	488.75	476.25
Carpenter 3.....	110	90	40	30	35.00	110	445.00	50.00	37.50	495.00	482.50
Do. 4.....	130	90	40	30	32.50	110	432.50	50.00	37.50	482.50	470.00
Able seaman 5.....	100	90	40	30	25.00	100	385.00	20.00	15.00	405.00	400.00
Ordinary seaman:											
First class 6.....	70	90	40	30	17.50	70	317.50	20.00	15.00	337.50	332.50
Second class 7.....	60	90	40	30	15.00	70	305.00	20.00	15.00	325.00	320.00
Apprentice 8.....	50	90	40	30	12.50	70	292.50	20.00	15.00	312.50	307.50
Nurse, male:											
First class.....	110	90	40	30	27.50	100	397.50	20.00	.....	417.50	417.50
Second class.....	100	90	40	30	25.00	100	385.00	20.00	.....	405.00	405.00
Nurse, female.....	100	90	40	30	25.00	100	385.00	20.00	.....	405.00	405.00
Fireman:											
First leading 1.....	150	90	40	30	37.50	110	457.50	50.00	37.50	507.50	495.00
Do. 2.....	140	90	40	30	35.00	110	445.00	50.00	37.50	495.00	482.50
Machinist.....	140	90	40	30	35.00	110	445.00	50.00	37.50	495.00	482.50
Chief electrician.....	140	90	40	30	35.00	110	445.00	50.00	37.50	495.00	482.50
Electrician.....	125	90	40	30	31.25	110	426.25	50.00	37.50	476.25	463.75
Fireman, donkey boiler.....	130	90	40	30	32.50	100	422.50	20.00	15.00	442.50	437.50
Fireman 5.....	120	90	40	30	30.00	100	410.00	20.00	15.00	430.00	425.00
Trimmer.....	90	90	40	30	22.50	100	372.50	20.00	15.00	392.50	387.50
Chief steward 6.....	150	90	40	30	37.50	110	457.50	50.00	37.50	507.50	495.00
Do. 7.....	145	90	40	30	36.25	110	451.25	50.00	37.50	501.25	488.75
Do. 8.....	130	90	40	30	32.50	110	432.50	50.00	37.50	482.50	470.00
Second steward.....	90	90	40	30	22.50	100	372.50	20.00	15.00	392.50	387.50
Steward (cabin).....	75	90	40	30	18.75	100	353.75	20.00	15.00	373.50	368.75
Stewardess (cabin).....	70	90	40	30	17.50	100	347.50	20.00	15.00	367.50	362.50
Steward (dining room).....	60	90	40	30	15.00	70	305.00	20.00	15.00	325.00	320.00
Cabin boy.....	45	90	40	30	11.25	70	286.25	20.00	15.00	306.25	301.25
Chief cook 6.....	175	90	40	30	43.75	110	488.75	50.00	37.50	538.75	526.25
Do. 7.....	145	90	40	30	36.25	110	451.25	50.00	37.50	501.25	488.75
Do. 8.....	125	90	40	30	31.25	100	416.25	20.00	15.00	436.25	431.25
Second cook 6.....	120	90	40	30	30.00	100	410.00	20.00	15.00	430.00	425.00
Do. 8.....	100	90	40	30	25.00	100	385.00	20.00	15.00	405.00	400.00
Third cook.....	85	90	40	30	21.25	100	366.25	20.00	15.00	386.25	381.25
Kitchen attendant.....	65	90	40	30	16.25	70	311.25	20.00	15.00	331.25	326.25
Baker.....	95	90	40	30	23.75	100	378.75	20.00	15.00	398.75	393.75
Pastry cook.....	95	90	40	30	23.75	100	378.75	20.00	15.00	398.75	393.75
Pantryman:											
First class.....	95	90	40	30	23.75	100	378.75	20.00	15.00	398.75	393.75
Second class.....	70	90	40	30	17.50	100	347.50	20.00	15.00	367.50	362.50
Storekeeper.....	85	90	40	30	21.25	100	366.25	20.00	15.00	386.25	381.25

¹ On all lines of the Italiana, all lines of the Sicilia with the exception of that Naples-Cagliari, and on the Bombay, Somalia, Benadir, Massaua, Red Sea, Alexandria, and Saloniki lines of the Marittima.

² On the less important lines of the Marittima and on the line Naples-Cagliari of the Sicilia.

³ See footnote ¹ of this section of this table and footnote ² of preceding section.

⁴ See footnote ² of this section of this table and footnote ³ of preceding section.

⁵ See footnote ³ of preceding section of this table.

⁶ On the Bombay and Somalia lines of the Marittima and on the Alexandria line of the Italiana.

⁷ On all lines of the Italiana, on all lines of the Sicilia with the exception of the Naples-Cagliari line, and on the Benadir, Massaua, Red Sea, Alexandria, and Saloniki lines of the Marittima.

⁸ On all lines.

STANDARD MONTHLY RATES OF PAY (IN LIRE) OF MEMBERS OF THE CREWS OF ITALIAN MERCHANT STEAMERS, EFFECTIVE JULY 1, 1919—Concluded.

Independent Owners.

Occupation.	Basic pay.	Gratuities.	Bonuses.				Increase granted by the Royal Maritime Commission, effective July 1, 1919.	Total.	Active sea-service allowance.	Grand total.
			Borne by the ship-owner.		Borne by the Government on requisitioned vessels, on others by the ship-owners.					
			Cost of living.	War risk.	Cost of living.	Forfeiture of shore leave.				
Boatswain ¹	170	5	90	25	30	42.50	110	472.50	50	522.50
Provision master.....	130	5	90	25	30	32.50	100	412.50	20	432.50
Able seaman (steersman).....	120	5	90	25	30	30.00	100	400.00	20	420.00
Seaman.....	60	5	90	25	30	15.00	70	295.00	20	315.00
Do.....	80	5	90	25	30	20.00	70	320.00	20	340.00
Apprentice ²	30	5	90	25	30	7.50	70	257.50	20	277.50
Do.....	40	5	90	25	30	10.00	70	270.00	20	290.00
Do.....	60	5	90	25	30	15.00	100	295.00	20	315.00
Fireman, first leading ¹	170	5	90	25	30	42.50	110	472.50	50	522.50
Fireman.....	140	5	90	25	30	35.00	100	425.00	20	445.00
Trimmer.....	110	5	90	25	30	27.50	100	387.50	20	407.50
Cook.....	155	5	90	25	30	38.75	100	443.75	20	463.75
Steward.....	100	5	90	25	30	25.00	100	375.00	20	395.00
Cabin boy:										
Under 21 years.....	80	5	90	25	30	20.00	70	320.00	20	340.00
21 years or over.....	100	5	90	25	30	25.00	70	345.00	20	365.00

¹ Optional.² For the first 6 months of service the basic pay is from 30 to 40 lire (\$5.79 to \$7.72), after 6 months from 40 to 60 lire (\$7.72 to \$11.58).*Notes Relating to All Shipping Lines.*

War bonus for active sea service.—What has been said about this bonus in the notes relating to rates of pay of ships' officers is also applicable to crews, with the sole difference that in the case of crews this bonus amounts to 2.50 lire per day for petty officers, and to 1 lira for all other members of the crew.

Infected ports.—The note relating to officers is also applicable to crews.

Monthly leave.—Provided that the captain thinks it compatible with the exigencies of the service, each member of the crew shall be granted 24 hours leave per month of service. Such leave is to be taken in the home port, and if not used each month may be accumulated during the same year. Accumulated leave which can not be used owing to service exigencies is to be compensated with one day's pay for each day of leave lost. On steamers of independent owners such compensation of lost leave is only compulsory if the member of the crew has served continuously for at least one year on steamers of the same owner.

Donkey boiler fireman.—The fireman assigned to the donkey boiler is to receive a monthly bonus for the maintenance, heating, and operation of this boiler. On steamers of the transatlantic and subsidized lines this bonus shall amount to 10 lire, and on steamers of independent owners to 15 lire.

Notes Relating to Transatlantic and Subsidized Lines.

Profit sharing.—The deck and engine crew of transatlantic companies receive a share of the traffic receipts of each voyage and of the savings in fuel and lubricants; the cooks, stewards, storekeepers, etc., share in the receipts from the sale of food. The subsidized companies grant only to the engine crew a share of the savings in fuel and lubricants.

Linen and bedding.—Petty officers, mechanics, electricians, and stewards are furnished linen and bedding by the companies.

Uniforms.—These companies furnish two uniforms per year to the deck and cabin crews. The trans-Atlantic companies pay one-half of the cost of the uniforms and the subsidized companies one-third.

Hours of labor at sea.—At sea the watch of the deck crew shall be divided into two turns, four hours of watch alternating with four hours of rest, with relief from 4 to 6 p. m., and from 6 to 8 p. m. during the watch below.

The watch of the engine crew shall under normal conditions be divided into three turns, four hours of watch and eight hours of rest.

In no case shall a fireman attend more than three furnaces or handle more than 4 tons of coal during 24 hours.

Work performed in excess of these hours shall be considered overtime work, unless performed in the interest of the safety of the ship, passengers, or cargo.

Apprentices under 16 years of age shall be excluded from night watch service and may not work more than 10 hours per day with a two-hour intermediate rest.

The hours of labor of the cabin and kitchen crew and captains of the hold shall be regulated according to the exigencies of the service.

Watch at sea.—The watch at sea begins for the engine crew: (a) With the firing of the boilers if this takes place before noon of the day previous to departure; (b) at noon of the day previous to departure if the boilers are being fired within the 24 hours of the day previous to departure; and (c) at noon of the day of departure, if the boilers are being fired on the day of departure. The first watch shall be given four hours off-duty before it begins its turn.

On arrival in port and after termination of the watch the crew shall be given eight hours off duty before being called upon to do

port service. The watches off duty must also be given eight hours off before being called upon for service.

For the deck crew the watch at sea begins at noon of the day of departure. On departure and on arrival of the vessel each member of the deck crew must be at his post and remain there until the vessel has settled into its course or anchored. On the arrival in port and after the vessel has been anchored the crew on duty must, after termination of the watch, be given four hours off before being called upon for port service, nor may the watch which on arrival was off duty be called upon for service until it has had four hours off.

Hours of labor in port.—The normal daily hours of labor in port of the entire crew shall be eight, distributed as follows: During the summer from 7 to 8 a. m., 9 to 12 noon, and 2 to 6 p. m. During the winter from 8 a. m. to 12 noon, and from 1 to 5 p. m. When traffic or special local conditions require it, the captain of the vessel may order a differing arrangement of the hours of labor. The total daily hours of labor may, however, not exceed eight.

Stewards and cabin boys assigned to waiting on ships' officers shall with the exception of days of departure be given shore leave after supper, but must return on board by 10 a. m. of the following day.

Overtime.—The notes on this subject relating to officers apply also to the crew. Compensation for overtime to be made at the following rates per hour: Petty officers, 0.60 lira; able seamen, 0.50 lira; ordinary seamen, cabin and mess stewards, and boys, 0.40 lira.

On arrival in the home port or in an Italian port of final destination the crew off watch duty may not be compelled to work overtime unless this is required for the safety of the ship, passengers, and cargo.

Loading and unloading.—With the exception of captains of the hold assigned to watching the cargo, the deck crew assigned at whatever hour to the loading or unloading of cargo shall be entitled to extra pay at the rate of 0.50 lira per ton, 0.05 lira per empty barrel, 0.25 lira per head of large animals, and 0.10 lira per head of small animals, if the work is performed on a piecework basis. Otherwise the crew shall receive regular overtime pay for such work.

Night watch in port.—Nights and on holidays one-half of the deck crew and one-third of the engine, cabin, and kitchen crew must stay on board against possible exigencies. On steamers of subsidized companies on which the deck crew numbers 15 or more men and on those of transatlantic companies on which the deck crew numbers 24 or more men the deck crew shall also be divided into three turns.

Members of the crew on actual night watch duty are on the following day entitled to a continuous rest equal in duration to that spent on night watch duty and in any case of not less than six hours.

Mechanics, electricians, and members of the cabin and kitchen crew, who have remained on board for night watch duty, are entitled to leave beginning at noon on the following day.

Notes Relating to Independently Owned Steamers.

General.—The rates of pay shown in the preceding tables are to remain in force as long as the standard freight rate from Cardiff to Genoa remains at 23 shillings in gold.

Hours of labor at sea.—At sea the watch of the deck crew shall be divided into two turns alternating every four hours with relief from 4 to 6 p. m. and from 6 to 8 p. m. during the watch below.

The watch of the engine crew shall under normal conditions be divided into three turns, four hours of watch and eight hours of rest.

The work of firemen shall be so regulated that as a rule each fireman shall handle from 4 to 5 tons of coal per day.

On steamers which can turn around to the right and left firemen shall receive a supplemental monthly bonus of 19 lire and trimmers one of 12.50 lire.

In case of sickness of firemen and trimmers the other firemen and trimmers must divide the turn of the watch in the most convenient manner, subject to approval by the chief engineer and without claim to extra pay.

Members of the crew who have not completed the fourteenth year of age are exempt from night work and may not work more than 10 hours of every 24 hours.

Watch at sea.—The watch at sea begins for the engine crew with the firing of the boilers preparatory to departure.

On arrival in ports in which the steamer stops more than 24 hours and the watch at sea is discontinued the deck watch must wipe and clean the engine aided by the fatigue watch. After this work has been finished these two watches are entitled to six hours' rest before doing port service.

The watch below deck resumes port service after having had its leave.

For the deck crew the watch at sea begins after the vessel has left port and after the deck is in a condition satisfactory to the captain.

At sea the deck crew in addition to navigating service must also attend to the cleaning and maintenance of the steamer from 6 a. m. to 6 p. m. during summer and from 7 a. m. to 5 p. m. during winter.

Hours of labor in port.—The normal daily hours of labor for the entire crew (deck and engine) shall be eight hours during the winter and nine hours during the summer, distributed as follows: During the summer from 6.30 to 8 a. m.; from 8.30 a. m. to 12 noon; from 2 to 6 p. m. During the winter from 8 a. m. to 12 noon, and from 1 to 5 p. m.

The hours of labor of the cabin, mess-room, and kitchen crew will be determined by the captain in accordance with the exigencies of the service.

Overtime.—Overtime work on Sundays, May 1 (where this holiday is observed by other classes of workers), and on holidays considered legal holidays in the various ports in which the vessel is stopping shall be compensated at the rate of 0.70 lira per hour in the case of petty officers, of 0.60 lira in the case of able seamen, and of 0.50 lira in that of ordinary seamen and apprentices. On the above holidays the crew must perform two hours' service in cleaning quarters.

The kitchen and cabin crew shall not be entitled to extra compensation for the discharge of its duties nor shall extra compensation be paid to any member of the crew for work performed in the interest of the safety of ship, passengers, and cargo.

Night watch in port.—Nights and on holidays one-half of the crew must remain on board against possible exigencies. Unless otherwise provided, the captain shall designate one or more persons for active watch service, who on the following day shall be entitled to as many hours of rest as were spent by them on night watch duty.

On holidays half of the crew not on watch shall be excused from presenting themselves on board, unless for service reasons all or part of them were previously requested to be present.

Sailing Vessels.

A tentative collective agreement as to the rates of pay and working conditions of officers and crews of sailing vessels has been submitted by the Italian Seamen's Federation (Federazione dei Lavoratori del Mare) to the shipowners. The latter have agreed to pay the wages stipulated in the schedule shown below, but have not consented to the working conditions laid down in the tentative agreement, which are still under discussion by the two parties. The rates of pay agreed upon are the following:

STANDARD MONTHLY RATES OF PAY (IN LIRE¹) OF OFFICERS AND CREW ON ITALIAN SAILING VESSELS, EFFECTIVE JULY 1, 1919.

Occupation.	Rate of pay.		Occupation.	Rate of pay.	
	With board.	Without board.		With board.	Without board.
Captain.....	540	700	Able seaman.....	300	400
Mate.....	400	500	Ordinary seaman.....	250	350
Boatswain.....	350	450	Boy.....	200	300
Steward.....	315	415	Apprentice.....	150	250

¹ Normally the value of a lira is 10.3 cents.

Notes.

Cost-of-living bonus.—In addition to the monthly rates of pay shown in the preceding table the officers and crew are entitled to receive a cost-of-living bonus. Shipowners are to pay this bonus to the Seamen's Federation for the purpose of establishing the cooperative society Garibaldi. The monthly bonus of captains has been fixed at 60 lire, that of the mate at 50 lire, and that of the crew at 45 lire.

Captains with certificate.—If the captain or mates are in possession of certificates as masters of ocean vessels or of long coastwise trade (*Gran Cabotaggio*), the monthly rate of pay, with board, of the captain shall be 1,100 lire, of the first mate 800 lire, and of the second mate 500 lire. In such a case, however, the captain and the ships' officers shall not be entitled to compensation in case of shortage of the crew, nor shall the captain receive 2 per cent of the freight receipts.

Voyages beyond the Straits.—On voyages beyond the Straits the entire personnel of the ship shall be entitled to a bonus of 100 lire per month.

Shortage of crew.—If for any reason whatever the crew is short one or more persons and these can not be replaced, their pay and board shall be distributed among the crew, inclusive of the captain.

Share of the freight receipts.—In addition to his contractual pay the captain shall receive 2 per cent of the freight receipts of each voyage.

Infected ports.—Whenever a vessel undertakes voyages to infected or malarious ports, the crew shall be entitled to a bonus of 20 per cent of the basic pay from the day of the departure of the vessel for the infected port up to the date of arrival at this port and from the day of departure from the infected port up to the day of arrival in the port of destination.

Extension of enrollment.—If on expiration of the enrollment the vessel is in a foreign port and the crew ships for the home voyage, it shall be entitled to a bonus of 15 per cent of the basic pay for the entire period of extension of the enrollment.

Changes in wage rates.—If during the period of enrollment the pay rates shown in the preceding table are increased or decreased by order of the Seamen's Federation, such increases or decreases shall be applicable to the crew.

Monthly leave.—Members of the crew shall, if in the opinion of the captain this is compatible with the exigencies of the service, be entitled to 24 hours' leave for each month of service, such leave to be granted during sojourn in ports. If for service reasons such

leave can not be granted the leave lost shall be compensated for with double pay.

Hours of labor at sea.—Watch service at sea shall be performed according to usage. The watch below may, however, not be called upon for service except in the interest of the safety of ship and cargo in cases of force majeure.

If during a voyage the crew is ordered to throw the ballast overboard, such work shall be considered extra work and be compensated at the rate of 1 lira per ton, unless the throwing overboard of the ballast is done for reasons of safety of the vessel and cargo.

Hours of labor in port.—In port the hours of labor shall be the same as those observed by the customhouse. Sundays, May 1, and legal State holidays shall be considered holidays.

Overtime.—Work performed on week days beyond the regular hours of labor shall be compensated at the rate of 1 lira per hour, and overtime work on holidays at 1.5 lire per hour.

Accidents.—All members of the crew shall be insured by and at the cost of the shipowner against industrial accidents for the period and on the basis of the monthly rates provided for in the accident insurance law. Any member of the crew who has not been or can not be insured shall be compensated by the shipowner in the same manner as if he had been insured.

Shorter Working Day in German Coal Mines.

COAL miners of the Ruhr district in Germany having made demands for a six-hour shift, the minister of labor, in accordance with a decree of June 18, 1919, appointed a commission to investigate the question of working hours in the Ruhr mining industry. The mine owners' associations, the three great miners' associations, and the salaried employees' associations were represented on this commission. There were in addition medical representatives and experts from other mining districts. The commission, with Dr. Ernst Francke presiding, sat 18 times and thoroughly examined the question of the reduction of working hours in the hard-coal mines of the Ruhr district. Experts named by the commission were called to give evidence, and mines, specified by mine owners as well as by miners, were visited for inspection. An article in *Soziale Praxis*¹ reports the results of the inquiry as follows:

The commission divided the field of inquiry into two parts. First, the socio-political aspect was considered, particularly from the point of view of health considerations. Then the economic and technical side of the problem was discussed.

¹ *Soziale Praxis und Archiv für Volkswohlfahrt.* Berlin, August 28, 1919.

The commission was unanimous in stating that from the point of view of health a shorter shift would be advantageous. Already the shortening of the shift by $1\frac{1}{2}$ hours, taken in conjunction with other factors, showed unmistakable results. It was not possible to supply a statistical statement showing the exact extent to which the improvement was the result of shorter hours or was produced by the other factors. It is certain, however, that the shorter shift played a very important part, and it is to be expected that the full effects of the shortening of the shift by $1\frac{1}{2}$ hours will be seen in the better state of health of the workers. It has not been possible to reach the position which had been attained before the outbreak of the war, but taking all conditions into consideration, this position has almost been reached. The miners' representatives and the mine owners' representatives draw opposite inferences from this ascertained fact.

The miners' representatives held that a further reduction of working hours would serve a good purpose. The mine owners' representatives considered such a reduction unnecessary. The improvement in the food supply played an important part, and an increase of rations—particularly of fats—was recommended by all members of the commission.

It was no easy task to make an international comparison, because of varying customs. A long discussion took place on this point. In the opinion of the miners' representatives the German miner is worse off than the British miner. The mine owners' representatives were of the opinion that he is better off. Both sides agreed that miners have a longer shift in Belgium and France than in Germany. A great deal of time was spent in dealing with the question of the effects of the reduction of working time by one and one-half hours—(1) on the working time; (2) on the time for hauling coal; and (3) on the output.

The parties were unable to arrive at an agreement. The employers declared that in any event they feared a further reduction of output as a result of shorter hours. The workers, however, while admitting a slight reduction during the transition period, regarded the shortening of working hours as the best means in the long run of encouraging a man to take pleasure in his work and thus increase his output. It would also have the effect of encouraging men to take to mining as an occupation and thus increase the supply of labor. In this way the total output would be increased.

The employers regard the diminished output since the reduction of hours as a proof of their contention. The percentage of diminution is attributable to the reduction of hours and is, to say the least, in proportion to the reduction of hours. A further proportionate diminution must be anticipated as the result of a further reduction of hours. Probably a still further diminution even will result, because with diminished production almost the same amount of nonproductive work is involved, with the result that the final effect will be more adverse. The fact that any reduction of hours affected not the nonproductive part of the shift but the actual work of production brought about still worse results.

On the last point the workers had other views. They regarded it as practicable that, by means of arrangements which were to be discussed later, the reduction of hours might affect the nonproductive part of the shift and not the time spent in actually getting the coal.

The nonproductive part of the shift can (in the opinion of the workers) be shortened if the men be conveyed to and from the coal face. Some of the

workers' representatives were of the opinion that a regular service by means of a cable railway would have this effect. The employers and the other workers' representatives, however, were of the opinion that it would not be advantageously practicable and that previous experience in transporting the workers to and from the actual place of work did not justify the hope that this method would be a success. Furthermore, the employers pointed out that the technical preparations for such a transport would take a long time. Nevertheless, they made a general recommendation that improvements should be made in this direction after the miners' representatives had expressed their willingness to cooperate.

The workers' representatives maintained, moreover, that the feared diminution of output would be avoided if various technical improvements were introduced. Special mention was made of an increased number of trucks and tubs for use in the pit and improvements in the use of compressed air. The employers, however, replied that everything possible had been done along these lines; that only a slow and slight increase in production could be anticipated; and that such measures would only slightly reduce the unfavorable effects of shorter shifts.

"More miners" was unanimously agreed upon to be the most effective means of compensating for shorter hours. A larger supply of labor is dependent in turn on more housing accommodation and on the general condition of the labor market, and last, but not least, on an amendment of the unemployment grant. Improvement along these lines would require time.

But if it be calculated that the former level of output could be attained by these means there still remains the technical difficulty that if the "double hauling shift" is maintained this haulage is crowded into such a brief space of time that it could not be dealt with except by completely changing the methods of haulage. It was unanimously agreed that such a change would involve a long period and heavy cost. The workers' representatives therefore suggested that hauling should be done during three shifts. The employers objected that this would mean a disproportionate increase in the number of workers, and that the repair work would be seriously affected, because though the few available hours under a triple haulage shift system might be sufficient for repair work in the headings they would be utterly inadequate for repair work in the shafts, main haulage ways, self-acting inclined planes, and the establishments above ground. Therefore a technical limit is set which is insurmountable. The miners, however, considered that there would be sufficient time for repair work in the shafts, main haulage ways, and pitheads. The workers, basing their arguments on the above-mentioned views as to technical and economic problems, have come to the conclusion that a shortening of the shift might perhaps result in a slight temporary reduction of output, but that this would soon be changed into a considerable increase in total output. The employers, on the other hand, are convinced that a shortening of the shift would inevitably result in a substantial diminution of output and that only a partial compensation would be possible even if a long period were allowed to secure an increased supply of labor, to build dwellings and to transform the plant and machinery. The scientific members of the commission supported this view.

The effect on the economic side of the matter would be seen in increased cost of production for mining enterprises. This, in turn, would bring about increased prices for coal and increased prices generally, and it would inevitably

cause a further drop in the value of the mark. The three sections of the commission were of one mind on these points. The workers, however, maintained that the effects of a four-shift system on output would bear such fruitful results throughout the whole of the industry, trade, and commerce of the country as to compensate for the expected unfavorable results.

There was perfect agreement in regard to the severe shortage of coal which is to be expected during the coming autumn and winter. This was realized after the coal commissioner's representative had made his report. A comparison of this year's conditions with last year's shows that no stocks have been laid in; output has dropped to two-thirds of the normal; the Entente demands many millions of tons of coal. Truly, a disconsolate picture.

With due consideration of the socio-political questions involved, particularly questions of health, also technical and economic questions and the situation with regard to the coal supply, the various sections of the commission tabled the motions which follow. In order to render agreement easier of attainment the miners' representatives postponed the date for introduction of the six-hour shift to four months from the date fixed in their original motion, and the mine owners' representatives dropped a part of their own original motion in favor of the wording of a motion as drawn up by the scientific representatives.

Miners' Motion.

1. That the National Government be asked by the commission to approach the other Powers with the proposal that the six-hour shift be introduced for work below ground in coal mines by means of an international convention. (Vote: 6 for; 12 against.)

2. That the commission should be declared a permanent institution by the minister of labor, in order that he may be in a position to investigate all technical and other preparations for the introduction of the six-hour shift, which shall become effective not later than February 1, 1920. (Vote: 6 for; 12 against.)

Scientific Representatives' Motion.

1. The same as (1) above. (Vote: See paragraph 1 above.)

2. That the commission be declared permanent—retaining its present powers and authority—by the minister of labor. It shall continue to investigate by means of expert equipartisan committees whether all technical and other preparations to render possible the introduction of the six-hour shift are being carried out in the individual mines and by all authorities concerned. The commission shall meet again at the end of November in order to examine the evidence and decide whether or not the six-hour shift can be introduced on February 1, 1920, without endangering the coal supply of Germany. (Vote: 6 for; 12 against.)

Mine Owners' Motion.

1. That the commission request the National Government to approach other Powers forthwith through diplomatic channels for the purpose of bringing about an international convention with respect to the introduction of the six-hour shift in hard-coal mines. (Vote: 6 for; 12 against.)

2. That the commission be declared permanent—retaining its present powers and authority—by the minister of labor. It shall continue to investigate by means of expert equipartisan committees from among its midst whether all technical and other preparations for the purpose of increasing the output are being carried out in the individual mines and by all authorities concerned. The commission shall meet again at the end of November in order to examine evidence and decide whether a further reduction of the hours of labor of workers below ground in mines be feasible without endangering the coal supply of Germany. (Vote: 6 for; 12 against.)

Possible Harmful Effects of a Shorter Shift.

In this connection an article in the *Deutsche Tages-Zeitung* on possible harmful effects of a shorter shift deserves mention. The Essen correspondent of this paper writes as follows:¹

The considerable reduction of working hours obtained by the miners as a result of their determined action appears to the great bulk of the miners to go not nearly far enough, so that they are pressing for a six-hour shift. At miners' meetings the impression is always given that the shortened hours are necessary on account of undernutrition. But the attentive observer in the Rhenish-Westphalian mining district will discover that the free time resulting from the seven-hour shift is not devoted to recreation, but to subsidiary work done for money. This practice has increased to such an extent that it endangers the employment of others. Thus the building workers make an appeal in the *Westfälische Allgemeine Zeitung* to the local miners not to take the bread out of the mouths of the bricklayers by working seven to eight hours a day in addition to their mining shift. Similar complaints have been made from Bochum and Recklinghausen. This abuse not only contributes to keep the coal output down, but it also increases unemployment in many trades and makes it permanent. In every town there are thousands of unemployed obtaining relief at a high cost to the State. This supplementary work of the miners robs these men of the possibility of earning their own living. Of the 5,000 unemployed in Essen, more than 2,000 could find work if no supplementary work were being done.

¹ Quoted in *Die Konjunktur*, Berlin, July 10, 1919.

Have Wage Increases Improved the Economic Condition of German Workers?

THE question as to whether wage increases have improved the economic condition of German workers is discussed in the *Metallarbeiter-Zeitung*,¹ the official organ of the German Metal Workers' Federation, which is one of the largest and most influential of German trade-union organizations. The question is answered in the negative, and the salient points in this discussion are here quoted in full:

Before the war it was obvious that only a part of the rise in wages wrung from the employers by the workers was a gain, as the greater part was swallowed up by the ever-increasing rise in the cost of commodities. The workers are seeking a net improvement of their living conditions, which finds some expression in the fact that the national wealth has risen in value by about 98,000,000,000 marks yearly, and the struggle for the distribution of this increase between employers and employed goes on. Had it not been for the trade-unions, almost the whole of it would have gone into the pockets of the employers. The struggle by the trade-unions was for the raising of the status of the workers, and the justice of it was acknowledged by all but the most selfish and overreaching of the employers. The revolution has done much to enlarge the political freedom of Germany, but the economic position resulting from the war presses heavily on the people and threatens to crush them. The workers, manual and nonmanual, do not always find the rise in wages and salary enough to make ends meet. The war has reduced the purchasing power of money and it is still falling. The prices of all necessities of life have risen very seriously for various reasons: shortage and the fact that demand exceeds supply is a principal cause, but the substitution of a paper for a gold currency and the loss of the war itself are important factors. The result has been a widespread demand for higher wages, and since November, 1918, the wages have risen considerably, but no one can assert that the conditions of living have improved; it is impossible that they should, because the prerequisites are wanting.

If all wages and salaries were doubled to-morrow this would not necessarily represent improvement of the condition of manual and nonmanual workers, but rather an opposite tendency. This may be illustrated by the following example: Before the war the daily milk supply of Düsseldorf was 130,000 liters [34,342.8 gallons], and this was equivalent to one-third of a liter [0.352 quart] per capita based on a population of 400,000. The daily supply at present is 20,000 liters [5,283.5 gallons], or one-twentieth of a liter [0.0528 quart] per capita. Were the income of Düsseldorf multiplied by three the milk supply would not be increased, and a similar line of argument applies throughout the whole country. Taking milk only, there is no more to be had; there is a great shortage of milch cows, and those there are get bad food and too little of it. One of the results is that a portion of the milk is held up by profiteers for higher prices. Throughout the whole country there is only one-half of the foodstuffs that it contained before the war. This condition can not be remedied by raising wages and salaries or by the issue of paper money. In-

¹ *Metallarbeiter-Zeitung*, Stuttgart, August 9, 1919.

crease of production at home and increase of import from abroad is the only cure. There is food enough abroad if we can pay for it, but we have not the means. Foreigners will have nothing to do with German paper money, and we must pay either in gold or goods. Since the revolution the gold reserve of the national bank has fallen from 2,500,000,000 to 1,000,000,000 marks,¹ and the difference has been used to purchase foodstuffs. This high road to bankruptcy can not be followed for long; we must export goods, and to improve the conditions of life we must produce. If goods produced in Germany are too dear—and high wages and feeble effort may have this result—we are at once faced by foreign competition; no one will buy our goods; our conditions of living will be made worse; and any person who advises the workers otherwise is only fooling them. Socialization will not alter the state of affairs unless it affects the quantity and kind of goods produced. It will come, however, and whether sooner or later depends on a variety of circumstances, not the least of which will be the attitude of the Entente toward us. But socialization will do no good unless it brings with it a great increase in production of goods, and the mere raising of wages and salaries is purely illusory. Every increase of wages entails an equivalent rise in price; for wages plus the employer's profit determine the price of goods. At present, however, profits are not on the up grade. Hence the mere rise of wages has effects analogous to the injection of morphine.

The need of the hour is a fall in prices and a rise in production. The Government, by paying out 1,500,000,000 marks for foodstuffs, has undoubtedly taken a right step, but the results of this step will be jeopardized if it is followed by further demands for an increase in wages and if production is checked by constant strikes. The strike to-day is a two-edged weapon; the workers need not renounce it as a weapon, but it should only be used after full and serious consideration of the evil conditions under which we are living and in no case without the fullest regard for trade-union principles.

¹ Owing to the fluctuating value of the German mark conversions are not made. The par value of the mark is normally 23.8 cents.

MINIMUM WAGE.

American Minimum Wage Laws at Work.

AERICAN Minimum Wage Laws at Work is the title of an article by Dorothy W. Douglas of Seattle, Wash., appearing in the December, 1919, issue of the American Economic Review. The writer sketches briefly the historical development of legislation on this subject in Australia and Great Britain and, somewhat more fully, in the United States. Two general types of laws are represented by the acts of Massachusetts and Oregon, respectively, the former not being actually enforceable, while the latter, developing under circumstances somewhat different, provides penalties for non-compliance.

The conflict of interest between the success of the business and the welfare of the worker was formally recognized in some of the earlier laws, and is in evidence in the attitude and action of employer representatives on wage boards. Actual cost of living as shown by weekly budgets is not fully persuasive; "usually the wage finally agreed upon lags about a dollar behind the original budget," which is itself commonly too low.

There is also found to be a lack of flexibility in administration, especially in the face of such rapid industrial changes as have been experienced in the past two or three years. Another weakness is held to exist in the lack of centralized authority in the commissions, whose hands are tied too closely by the requirements of dependence on the action of advisory boards. These latter are likely to be partisan, and inclined to debate, while the employee representatives are probably neither able nor courageous enough to stand up against those of the employers.

Recommendations are made under three heads: First, the need for a real living standard; second, the need for a more flexible standard; third, the need for centralization of administrative responsibility. Under the first, the findings of such an agency as the United States Bureau of Labor Statistics would furnish a basis, while the same data would afford a standard for adjustments from time to time. To meet the ends of the third suggestion it is proposed that minimum wage laws be enforced by a bureau in the department of labor of the State, with a special deputy commissioner of labor at its head.

It is also strongly urged that there be a campaign to secure public interest and confidence in the work of the commissions and adequate appropriations to carry on their work.

COOPERATION.

Activities of British Cooperative Societies During 1917.¹

THE following particulars relating to industrial cooperative societies in the United Kingdom are based upon returns made direct to the Ministry of Labor, supplemented by information supplied by the Cooperative Union and the chief registrar of friendly societies.

At the end of 1917 there were in the United Kingdom 1,465 industrial cooperative societies, with an aggregate membership of 3,831,896; a total share, loan, and reserve capital of £81,770,273;² a total trade (distributive and productive) of £272,746,849;³ and a total profit—before deduction of interest on share capital—of £18,023,879.

Excepting for decreases in the number of societies—due mainly to amalgamation—and in the amount of profit, these figures show considerable growth as compared with 1916, there being an increase in membership of 268,127, or 7.5 per cent; in capital of £3,832,537, or 4.9 per cent; and in trade of £35,221,714, or 14.8 per cent. The profit, on the other hand, showed a decrease of £934,509, or 4.9 per cent. As regards the increase in trade, it should be remembered that the higher level of prices has had an important bearing on the increased value of sales.

The total number of persons directly employed by the societies was 156,945,³ and the total wages paid during the year amounted to £11,611,976,³ compared with 154,622 employees and £10,391,245 in wages in 1916.

Distribution.

At the end of 1917, 1,339 retail and two wholesale industrial societies were engaged in distribution. These societies had an aggregate membership of 3,790,448; a total share, loan, and reserve capital of £73,010,227; sales amounting to £216,951,643, and a profit on distribution—before deducting interest on share capital—of £17,114,849; while the total number of persons employed in distribution by the societies was 100,756, and the total wages paid £7,042,322.

Of the total profit of £17,114,849, a sum of £15,922,596 was made by the retail societies, and £1,192,253 by the two wholesale societies.

¹ Labour Gazette, London, November, 1919, pp. 465-467.

² The par value of the British pound sterling is \$4.8665, of the shilling 24.33 cents and of the penny 2.03 cents. Owing to the fluctuating exchange rate no attempt is made in this article to make conversions into United States money.

³ These figures are exclusive of the number and wages of persons employed in agriculture by industrial societies, and of the sales and transfers of agricultural produce by these societies.

In the case of the retail societies the greater part of the profit was distributed to the members as a dividend on purchases at an average rate of 1s. 8½d. in the pound sterling in England and Wales, 2s. 5½d. in Scotland, and 1s. 1d. in Ireland, the average for the United Kingdom being 1s. 9¾d. Compared with 1916, these rates of dividend showed a decrease of 5½d. in England and Wales, 4¾d. in Scotland, 2¼d. in Ireland, and 5¼d. for the United Kingdom. Nonmembers usually receive dividends at one-half these rates.

The English and Scottish wholesale societies paid to members a dividend on purchases of 3d. and 5½d. in the pound sterling, respectively. This was a decrease of 2d. in the case of the English Wholesale Society and of 2½d. in the case of the Scottish Wholesale Society.

Profit-sharing with employees.—Of the total 1,339 retail societies, 132, employing 15,255 persons and paying wages amounting to £1,096,565 in their distributive departments, allotted out of the profits a total of £43,425 to their employees as a bonus on wages, this being equal to 4 per cent.

Production.

In 1917, there were 1,108 industrial cooperative societies of various types engaged in production, consisting of 985 retail and 2 wholesale distributive societies having productive departments, and of 121 associations for production only: these consisting of 4 corn-milling societies, 39 breadmaking and other consumers' societies, and 78 associations of workers.

The following table shows by industry groups the number of persons employed, the amount of wages paid and the amount of sales, during 1917:

NUMBER OF PERSONS EMPLOYED, AMOUNT PAID IN WAGES, AMOUNT OF SALES DURING 1919 BY CONSUMERS' AND WORKERS' COOPERATIVE PRODUCTIVE SOCIETIES, BY INDUSTRY GROUP.

Industry group.	Consumers' societies.			Workers' societies.		
	Number of employees.	Amount paid in wages.	Amount of sales.	Number of employees.	Amount paid in wages.	Amount of sales.
		£	£		£	£
Food and tobacco.....	15,435	1,535,310	42,864,120	167	15,010	192,816
Clothing.....	21,233	1,455,994	4,620,108	4,036	289,595	1,621,474
Soap, candles, and starch.....	1,701	135,578	2,122,604			
Textiles.....	2,641	157,237	1,029,119	1,623	129,672	971,269
Buildings, quarrying, and woodworking.....	2,940	356,533	778,888	144	17,021	53,779
Printing.....	1,853	143,791	543,422	941	87,453	312,486
Metal, engineering, and ship-building.....	563	59,560	214,144	391	32,428	86,159
Other industries.....	2,453	147,427	360,180	48	4,679	15,863
Total, 1917.....	48,819	3,991,430	52,532,585	7,350	575,858	3,253,846
Total, 1916.....	50,948	3,771,283	46,340,593	7,625	518,942	2,592,210
Per cent of increase (+) or decrease (—).....	—3.3	+5.8	+13.4	—3.6	+11.0	+25.5

Profit-sharing with employees.—Of the 1,108 societies engaged in industrial production, 126, employing 10,432 persons in production, with wages amounting to £823,689, allotted a sum of £51,110 to these employees as a bonus on wages, this being equal to 6.2 per cent. Of the total amount £10,162 was allotted by 81 retail distributive societies, £7,533 by 3 consumers' productive societies, and £33,415 by 42 associations of workers.

Share of employees in management.—Sixty-nine of the 78 associations of workers for production, with sales amounting to £3,227,210, or 99.2 per cent of the total sales of the associations at work in 1917, made returns showing the extent to which their employees and others shared in the membership, capital, and management of the associations. The returns showed that the total membership of the 69 associations was 25,279, of whom 4,819, or 19.1 per cent, consisted of employees; 15,884, or 62.8 per cent, of other individuals; and 4,576, or 18.1 per cent, of other societies. Of the 7,254 persons employed by the associations, 4,819, or 66.4 per cent, were members of the associations employing them.

Of the £889,839 share and loan capital, £157,124, or 17.7 per cent, belonged to employees; £340,505, or 38.3 per cent, to other individual members; and £321,597, or 36.1 per cent, to other societies. The remaining £70,613, or 7.9 per cent, consisted of loans from nonmembers, including bank overdrafts.

The total number of directors or committeemen of the associations was 660, of whom 274, or 41.5 per cent, were employees of the associations; 255, or 38.6 per cent, were other individual members; and 131, or 19.9 per cent, were representatives of other (shareholding) societies.

VOCATIONAL EDUCATION.

Minnesota Plan for the Reeducation and Placement of Cripples.

By OSCAR M. SULLIVAN.¹

CORRECT systems and correct methods for the rehabilitation of cripples bid fair to be the subject of as much interchange and conflict of views in the years just ahead as has been the case for some time with similar topics in the field of workmen's compensation. It is the purpose of this article to call attention to the Minnesota plan for the reeducation and placement of cripples in the belief that it has many features which might well be considered by other States when casting around for standards for such legislation. In language the reeducation act is almost identical with the Massachusetts act, pioneer in the field. The chief essentials in which it differs are that authority is placed under the State board for vocational education instead of the industrial accident commission, and that the scope includes all cripples. For the phraseology, the combination of conciseness of expression with comprehensiveness, due acknowledgment is made of indebtedness to the Bay State framers of social legislation.

The Minnesota act has been in force since July 1, 1919; hence the interpretation that has been given it and the system that is being built around it are now fairly clear. In brief, it can be characterized as a phase of the State's activities in industrial education, administered by the case-work method, and recognizing fully the special relation to the State's other activities on behalf of labor. All these characteristics we believe are significant and mark what is destined to become a distinct type of rehabilitation work.

An Activity of the Department of Education.

To begin with, the assignment of the work to the department of education is not fortuitous or due to local reasons. In any State there are likely to be two other departments of government which could be given consideration as proper sponsors for it. They are

¹ Director of reeducation, Minnesota Department of Education.

the department of public welfare or charities and the industrial accident commission or labor department. To assign it to the former would mean that the State considered it as something undertaken out of sympathy in order to alleviate distress. The handicapped man would join the "three d's—dependents, defectives, and delinquents." To give it to the industrial agencies would not be objectionable, since it would be connecting it closely with the compensation system. It would, however, be illogical to divert to another branch of the government something which is predominantly a matter of education and vocational guidance. By placing the work with the department of education it is recognized as akin to the other educational activities of the State, an opportunity offered the individual because it is for the public good.

From the standpoint of administration it places the work in close touch with the other parts of the State's educational system and makes easy of reference the data which the State has in connection with industrial education. This perhaps would not make up for lack of correlation with the compensation system, if such were a necessary result. But it is not. The Minnesota act requires a plan of cooperation between the board for vocational education and the department of labor and industries, subject to the approval of the governor. The two departments have chosen to make the connection an organic one by giving the same person the direction of the compensation division and the division of reeducation. Correlation of work is, therefore, assured. This plan is, of course, not the only feasible one for securing effective cooperation. The essential thing is that the connection between the two activities should be genuine and continuous rather than formal and perfunctory.

The case-work method implies individual treatment for each case. The division is without funds or authority to start a central institution for the care and training of cripples and has not as yet found any need for such an institution. The policy of the division is to let a contract for instruction in each case with a suitable institution, teacher, or industrial establishment. This has been found perfectly feasible so far, and much more immediately practical than the organization of a new school. Should subsidized workshops for certain types, such as the blind, the paralytic, or the tubercular prove to be necessary, it is expected that these will be launched by private agencies and a subsidy covering the cost of the training given by the division for each new person trained. This would permit the workshop to be on a business basis, which is desirable, and still avoid the objection always advanced against the entrance by the State into the business field.

Two features in the qualification part of our law seem to us to have particular merit. One is that there is no poverty test. This is a corollary of the assignment of the division to the department of education. The training is given as a public duty, not as a charitable need. The other feature is that only bona fide residence in the State at the time the disability was incurred is required of the beneficiary. There is no one-year settlement harking back to the old poor laws. It is possible for the State, therefore, to undertake the reeducation of a man, for instance, who has just moved to the State intending to remain and who suffers an accident while engaged in one of the State's industries. The legal possibility squares with the moral obligation.

Public Relief not a Function Under the Law.

Perhaps the greatest difference of opinion in regard to the rehabilitation of cripples centers around the question whether certain things of a public-relief nature should be provided by the State. Included under this head would be occupational therapy and other special medical treatment, artificial limbs, and, greatest of them all, maintenance during training. Our act neither enjoins nor prohibits any of these. The question has been definitely faced by the State board for vocational education, however, and a rule adopted which holds none of them to be within the province of the division. We believe the decision is based upon sound public policy. In the compensation cases who form a large per cent of the disabled persons, all of the items above referred to are covered by the provisions of the law. They are cared for through a sound social insurance method, and could only be harmed by being offered public charity besides. Many of the railroad cases, another class, receive in damages under the liability acts greater amounts even than the workers under compensation, hence for these also a public relief scheme is inapplicable. For the other cases, the victims of private accidents and disease, the ideal method would be another resort to the social insurance idea, namely, to provide in a universal health-insurance act limited specific indemnities for such cases. Creation of a public relief fund now would only serve to put off the day when the question would be met properly, and prolong treatment by public charity of a problem that should be cured by social insurance. For the present many cases without means can be handled by securing temporary positions and giving them night-school training. Others can be cared for through existing public and private relief agencies. The Minnesota division has already entered into definite arrangements for co-operation in such cases with the central councils of social agencies in Minneapolis and St. Paul and the Social Service Club of Duluth.

The position taken by the board for vocational education does not mean that the division will not be of all the service possible in an advisory way as regards medical treatment, prosthesis, etc. Excellent results have already been secured in this line in the compensation cases and should eventually be secured in the others also. It is not the policy of the division to wait for an application, but on the first word of a serious accident, through the department of labor, the hospitals, the clipping service, or otherwise, steps are immediately taken to get in touch with the injured person and from that time on contact with the case is continuous.

The cases that have already come before the division present a wide variety. They include compensation accidents and railroad accidents, farm accidents, hunting accidents, street accidents, and impairments due to disease. It seems probable that the estimate made in 1918 by the governor's commission which studied the subject will be fully borne out. They reported that the probable number of cripples in Minnesota in any one year was between 900 and 1,000. This, of course, applies only to those seriously enough impaired to need rehabilitation.

The advisability of including all cripples under the law, not merely those which are the result of industrial accident, appears when the administrative problems of the work are disclosed. If the other cripples are not included in the provisions of the reeducation law some other agency, public or private, must take care of them. There will thus be a duplication of effort and a scattering of energies, when the situation calls for a most decided and effective concentration of energies. In addition, there is the fact that the social reasons for solving the problem in the one case are the same as in the other.

The Minnesota division has not inaugurated its work by launching a survey. The reasons for this are several. It was felt that the appropriation was so limited that it would be best to spend it all on direct work for cripples, especially as the general size of the field and the principles which should govern the work were known. In the second place, employers have been rather overworked with surveys of recent years, and it was felt best not to begin this new activity with something which might irritate them. Finally, it was felt that very satisfactory information could be gathered by the division as it handles each case, and that when this is supplemented by a gradual canvass made by the factory inspectors of the State department of labor as they make their regular inspections, it would give practically a complete survey without the expense and disadvantage of a formal undertaking of this character.

Placement of Cripples.

Another feature of the act which is important is that the placement is directly under the division of reeducation and not a cooperative activity of the State employment bureau. The division has its own placement officer, and in order to keep him in touch with the regular employment work it is arranged so that his headquarters are in the State headquarters of the free employment service. In this manner it is possible to give more specialized attention to the placement of handicapped persons than could be secured in any other way. Another consideration also makes this arrangement essential. One of the biggest tasks ahead of the division is to educate employers to give disabled persons a chance. The division can and will undertake this, while a regular employment service would probably be unwilling or unable to do so. Many employers still have an idea that insurance companies will raise their rates if they hire handicapped persons. Such an act was made illegal in Minnesota by the 1919 legislature, but it takes time for the information to spread. It is felt, however, that the bulk of the indisposition to hire impaired persons is due to an underestimate of their capacity. Only a prolonged and vigorous campaign of education will overcome this.

Text of the Reeducation Act.

Such, therefore, are the principles embodied in the Minnesota plan for reeducation and placement of cripples. Its enabling act is not so long as to frighten a body of legislators or to make them feel that they are plunging into a gigantic experiment involving unknown financial liabilities. Yet it makes a full grant of power and meets the situation in a manner to accomplish a large amount of good without preliminary delay. To those States which have been reluctant to take action because they feel that a new public institution or a new experiment in public relief was involved, the enabling act and the plan it stands for are offered for consideration. The text of the act, which was approved April 26, 1919, is as follows:¹

AN ACT Empowering the State board for vocational education to establish a division for the reeducation and placement of persons disabled in industry or otherwise, permitting cooperation with the Federal Government, and making an appropriation.

Be it enacted by the Legislature of the State of Minnesota:

SECTION 1. There is hereby established, under the direction and control of the State board for vocational education, a division for the training and instruction of persons whose capacity to earn a living has in any way been destroyed or impaired through industrial accident or otherwise: *Provided*, That at the time when the accident or disability was incurred they were residents or citizens of the State of Minnesota. The said board shall in its

¹ Chapter 365, Laws 1919.

regular reports to the legislature describe in detail the work of the division and may from time to time issue bulletins containing information relative thereto.

SEC. 2. The employees of the said division shall be appointed and their salaries determined by the said board. The division shall be furnished with suitable quarters in the State capitol, and the board may expend for salaries and other necessary expenses of such division such amounts as shall be appropriated by the legislature.

SEC. 3. The State board for vocational education and the department of labor and industries or any agency which may succeed it in the administration or supervision of the workmen's compensation act, shall formulate a plan of cooperation with reference to the work of said division. Such plan shall be effective only when approved by the governor of the State.

SEC. 4. The said division shall aid persons who are incapacitated as described in section 1 in obtaining such education, training, and employment as will tend to restore their capacity to earn a livelihood. The division may cooperate with the United States Government, and as a part of such cooperation may extend the benefits of this act to any civil employee of the United States disabled while in the performance of his duty, without regard to the residence or citizenship of such employee, if in the judgment of the board the benefits offered by the Federal Government are sufficient to compensate for the cost. The division may of its own accord establish or maintain, or in cooperation with local boards of education assist in establishing or maintaining, such courses as it may deem expedient, and otherwise may act in such manner as it may deem necessary to accomplish the purposes of this act.

SEC. 5. This act shall take effect and be in force from and after its passage.

Agreement Providing Part-Time Instruction for Textile Workers.¹

WITH the rapid increase in the number of part-time trade-extension classes being organized, an instruction agreement between the employer, employee, and the public school becomes more and more desirable. At a recent conference in Sylacauga, Ala., of representatives of the State board for vocational education, employers in textile mills, and the Federal agent for industrial education for southern region, the following written agreement was entered into by a mill and State officials:

It is proposed to organize a scheme of textile manufacturing instruction under the following conditions:

(a) *Type of school.*—The type to be employed is the part-time trade extension, combined with an evening school. (This combination is explained below.)

(b) *Board of control.*—The school is under the direction and control of the Mignon board of education.

(c) *Length of term.*—Instruction is to be given for 48 weeks of 3 hours per week, aggregating 144 hours under the part-time system; and 48 weeks of one hour per week, aggregating 48 hours, under the evening system.

¹ From Vocational Summary, October, 1919, p. 109. Washington.

(d) *Plan of organization.*—The hour of part-time instruction is to be the closing hour of the working day on employer's time¹ classified as part-time instruction, followed immediately by one-half hour, in continuous session, for the first two meetings per week on employee's time, classified as evening instruction. Assuming two groups operating under the above plan, one group is to meet Monday, Wednesday, and Friday, known as group A, and the other group Tuesday, Thursday, and Saturday of each week, known as Group B.

(e) *Time of meeting.*—Group A is to meet Monday and Wednesday, from 5 to 6.30 p. m.; and Friday, 5 to 6 p. m. B is to meet Tuesday and Thursday, 5 to 6.30 p. m.; and Saturday, 7 to 8 a. m.²

(f) *Financial.*—Fixing \$1.50 per hour as the rate of compensation for teachers employed, local funds must provide 37½ cents per hour for one-fourth of the salaries of teachers; State funds 37½ cents per hour for one-fourth of the salaries of teachers; and Federal funds 75 cents per hour, or one-half of the salaries of teachers. All other expenditures are to be provided for by the local board.

(g) *Supervision.*—The State board for vocational education through its fund for teacher training and supervision is to provide adequate assistance to local teachers in organizing material for teaching purposes without cost to the local board.

(h) *Course of study.*—A general mill course in textile instruction is to be offered. The course is divided into three main groups under the respective headings of carding, weaving, and spinning. Group A recites as follows: Monday, carding; Wednesday, weaving; Friday, spinning. Group B—Tuesday, carding; Thursday, weaving; Saturday, spinning.

(i) *Students.*—Fifteen operatives regularly employed in the Sylacauga Mills who are 16 years of age or over are to be selected for each group. If the demand for the course exceeds 30, a waiting list is to be established and enrolled in the order of application and selection.

(j) *Teachers.*—Three teachers for each group, one for carding, one for weaving, and one for spinning, are to be provided. The teaching group is to be made up of second hands, overseers, or higher officials. Teachers are to be paid at the rate of \$1.50 per hour for the first year's work, \$1.75 for the second year, and \$2 for the third and succeeding years.

(k) *Plant and equipment.*—Plant, equipment, and supplies are to be furnished by the local board of education. Instruction will be given in the mill, community building, or school building. Well lighted, heated, and ventilated rooms, with adequate blackboard, seating, and writing facilities, with ready access to the entire mill equipment, is to be considered the minimum requirement.

¹ By continuing the class for one-half hour on employees' time it is thought that disinterested pupils will be eliminated from the class. This is the company's method of avoiding "deadheads" on company time.

² The change was made at the Saturday session on account of the plant being in operation only one-half day and to avoid the difficulties arising from pay day.

EMPLOYEES' REPRESENTATION.

Works Councils and Shop Committees in the United States.

A RECENT study on works councils in the United States,¹ by the National Industrial Conference Board, furnishing another evidence of the widespread interest in plans for representation of employees in industry, covers 176 companies or corporations having works councils in 225 different industrial plants, affecting approximately 500,000 workers. In addition to those plans created as a result of awards of the National War Labor Board, the Shipbuilding Labor Adjustment Board, and other Government agencies, there are 105 which were voluntarily put in operation by employers. The term "works council," which has not been generally adopted in this country, was determined upon, the report states, as being more definite and exact than that of "shop committee" which has been commonly used.

Owing to the comparatively brief experience of nearly all the existing committees, no recommendation as to the establishment of works councils is made in the report, which gives a brief account of their development from the comparatively recent date of 1904, when the first known example of a works committee was formed at the plant of the Nernst Lamp Co., in Pittsburgh. The report makes a distinction between the principle of collective dealing by employees of individual establishments with their employers and collective bargaining which involves recognition of labor unions as organizations, and states that the institution of works councils includes acceptance of the former principle only.

A tabulation of works councils by industries shows that 144 were found in the metal trades, while 81 were distributed over other industries, and that in the distribution by size of establishment the majority were found in plants having over 500 workers. Of particular interest was the distribution according to the extent of trade-unionism. There were 81 plants from which information was received on this subject, and but 2 of these were "closed nonunion shops" and one other nominally so. Out of about 60 firms reporting the

¹ National Industrial Conference Board. Works councils in the United States. Boston, October, 1919. 135 pp. Research report No. 21.

percentage of union labor in their employ only 8 had no union members, while the number of trade-unionists in the majority of the establishments ranged from 20 to 90 per cent of the force.

The details of organization, the scope of the plans, and the functions and activities of the works committees are dealt with in considerable detail, but it is in the chapter on "Experience with works councils" that the main interest lies, since heretofore, owing to their brief existence, there has been little information collected as to the results attained by the committees. There are various factors which affect the success of such attempts which must be taken into consideration, the report states, such as "the individual circumstances under which they were formed, differences in type of organization, the character of relations between employer and employees, the personality of the management, the type of employees, the size of establishment, and industrial conditions prevailing at the time of their introduction."

It is stated that only a small minority of the councils have been entirely given up or have failed to work satisfactorily, and in most of these cases the committees were established by governmental agencies to meet war emergencies. In general, it is said that the committees have had a beneficial effect on labor conditions, although in a few instances they seem to have aggravated labor troubles. They evidently have been of some effect in reducing labor turnover, but there seems to be only a small amount of evidence of an increase in productive efficiency through their influence or of reduction of tardiness or absenteeism. There was evidence in most cases reporting that a conservative type of employee had been elected to membership, although approval of the ones selected was by no means unanimous. In general it was found that the committees have been instrumental in improving the relations between management and employees, and 23 establishments reported that labor difficulties have decreased or been entirely eliminated through the agency of the committees.

Definite testimony of the effect of the councils on the spread of unionism was given in 13 cases, 7 of which reported an increase in union membership, while among the remainder it decreased. The report as a whole seems to show such a diversified experience that it is difficult to generalize as to the effect of the councils, although the conclusion was reached as a result of the investigation that they are "worthy of unprejudiced consideration on the part of American industry."

Shop Committees and Industrial Councils.¹

AN INVESTIGATION has recently been made under the direction of the New Jersey State Chamber of Commerce having for its purpose the consideration of the problem of labor adjustment, through the medium of shop committee systems, particularly as it might relate to the development of such plans in industrial plants in New Jersey.

Preceding this study a series of conferences were held in Newark by the chamber of commerce to which several large industrial establishments were invited to send both employer and employee representatives. At the second meeting a committee, with representatives of organized labor and of capital, employees and employers of plants having shop committees, and the public, was appointed to study the systems and make recommendations. This committee after a third conference recommended that a national conference should be called and also that the chamber of commerce should authorize a thorough investigation of the question.

With this as a background a special study was made of the systems in 13 establishments which were decided upon as embodying practically all the features to be found in any of the systems now in force.

In speaking of the various types of shop committee plans the writer of the report of the investigation says:

Whatever name or form a shop committee may assume, it may be, broadly speaking, described and distinguished by three features: It involves the election of delegates by the workers of the shop; the constitution of these delegates into one or several committees; the dealings between such committee or committees and the management either in a joint committee session or through individual delegates or delegations and interviews.

The writer does not cover any new ground in the discussion of the objects and functions of shop committees, the subjects mentioned as being within the province of shop committees being practically the same as those which have been advocated by the majority of writers on the subject. The analysis of the relation of shop committees to labor unions, however, is both comprehensive and illuminating. The discussion covers the possibility of substituting shop committees for unionism, the dangers to be found in a destructive rivalry, recognition of the unions, centralization of power in union organization, the shop committee as a means toward filling the breach within the

¹ New Jersey State Chamber of Commerce. Bureau of State Research. Shop committees and industrial councils. Pts. I and II. Prepared by Paul Studensky, supervisor of staff on industrial relations. Newark, July, 1919, 63 pp. "New Jersey," Consecutive No. 18.

union organization, and shop committees in union shops. The opinion is expressed that owing to the possibility of rapid organization of workers in individual establishments it is becoming increasingly difficult for employers to adopt a neutral attitude toward the labor unions, and that "only the development of an appreciation on the part of the employers of the need of labor organization and on the part of the latter of the value of shop committees can prevent an undesirable conflict." "Company unions," the writer believes, present little opportunity for the establishment of amicable relations, but this must be secured through recognition of the unions and participation by them in the development of shop committees, and through this utilization of the shop committee the evils connected with centralization of power in the hands of a few labor officials may be corrected. Without this he considers there is danger of a destructive rivalry between the two types of organization which will inevitably result in the destruction of one or the other of them.

The failure of the unions to keep the organization democratic enough to suit the rank and file of the workers may be remedied, in the writer's opinion, by utilizing the workshop committees to give a larger amount of authority to the average member while thus leaving the leaders opportunity to devote their attention to the broader problems of the labor movement.

Industrial councils are advocated as a means of stabilizing conditions throughout whole industries or over all the industries of certain areas—local, State, national, and international. Councils have now been agreed upon by representatives of employers and employed in six industries: Clothing, electrical, harbor marine, long-shore, ocean marine, and printing, while plans for councils covering a certain area include the International Labor Conference, National (United States) Industrial Conference, Canadian National Industrial Conference, New Jersey Industrial Council, New York State Labor Board, and industrial community councils. The question has been raised as to whether industrial councils combined with shop committee systems will supersede labor unions. To the writer this does not seem probable, since in a measure there will always be a conflict of interests.

The 13 shop committee systems considered in the report are divided into 5 groups representing the following types: The War Labor Board plan; the combination of a shop committee system with unionism; the Rockefeller plan; the Federal plan, and the cooperative plan with representation on the board of directors.

Application of Industrial Council Plan to British Civil Service.

THE subcommittee of the Interdepartmental Committee of the British Government, appointed to draw up a plan by which the Whitley industrial council scheme might be applied to the administrative branches of the civil service, submitted its report in March, 1919, which was approved by the War Cabinet and was considered on April 8 at a conference of representatives of associations covering practically the whole of the administrative, clerical, manipulative, and manual civil services and officials of the Government departments concerned. This report was noted somewhat at length in the MONTHLY LABOR REVIEW for July, 1919 (pp. 123-126). The matter was subsequently referred to a committee of 30 representing, in equal numbers, the Government departments and the civil-service associations, and its report was on July 3 submitted to a joint conference of official representatives and representatives of the staff associations presided over by the Chancellor of the Exchequer, and was adopted with certain modifications. This report of the national provisional joint committee was noted in the MONTHLY LABOR REVIEW for August (p. 132).

Following the adoption of this latter report a national council for the administrative and the legal departments of the Government was established, and on July 23 a committee of five official representatives and five staff representatives was appointed to draw up a model constitution.¹ This has been done and has been circulated by the Treasury, together with a letter recommending that steps be taken to form departmental councils on the lines indicated. The model constitution consists of 26 paragraphs dealing with membership, officers, objects and functions, committees, etc. Paragraphs 13 to 16, covering objects and functions, are as follows:

13. *General objects.*—The general objects of the council shall be to secure the greatest measure of cooperation between the administration, in its capacity as employer, and the general body of the staff, in matters affecting the department, with a view to increased efficiency in the department combined with the well-being of those employed; to provide machinery for dealing with grievances; and generally to bring together the experience and different points of view respecting conditions of service within the department.

14. *Functions.*—The scope of the council shall comprise all matters which affect the conditions of service of the staff in the department, and its functions shall include the following:

(I) Provision of the best means for utilizing the ideas and experience of the staff.

¹ Data taken from the Labour Gazette, London, September, 1919 (p. 371).

(II) Means for securing to the staff a greater share in and responsibility for the determination and observance of the conditions under which their duties are carried out.

(III) Determination of the general principles governing conditions of service, e. g., recruitment, hours, tenure, and remuneration, in so far as these matters are peculiar to members of the staff of the department.

(IV) The encouragement of the further education of the staff, and their training in higher administration and organization.

(V) Improvement of office machinery and organization, and the provision of opportunities for the full consideration of suggestions by the staff on this subject.

(VI) The consideration of proposed legislation so far as it has a bearing upon the position of members of the staff in relation to their employment in the department.

(VII) The discussion of the general principles governing superannuation and their application to the members of the staff in the department.

15. *Promotion and discipline.*—Without prejudice to the responsibility of the head of the department for making promotions and maintaining discipline, it shall be within the competence of the council (1) to discuss any promotion in regard to which it is represented by the staff side that the principles of promotion accepted by or with the sanction of the national council have been violated; and (2) to discuss any case in which disciplinary action has been taken if it is represented by the staff side that such a course is desirable.

16. Questions common to two or more departments (including the * * * department), not being general questions, shall be reported to the national council. The council may request the national council to appoint a chairman for interdepartmental meetings for the consideration of such questions.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in November, 1919.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in November, 1919, from representative establishments in 13 manufacturing industries. Comparing the figures of November, 1919, with those of identical establishments for November, 1918, it appears that in 10 industries there was an increase in the number of persons employed, while in 3 there was a decrease. The largest increase, 29.8 per cent, is shown in automobile manufacturing, and the greatest decreases—33.7 and 26.9 per cent—appear in iron and steel and in car building and repairing, respectively.

Eleven of the 13 industries show an increase in the total amount of the pay roll for November, 1919, as compared with November, 1918, and two show a decrease. The most important percentage increases—68.4, 67.4, 59.5, and 52.1—appear in men's ready-made clothing, silk, automobile manufacturing, and boots and shoes, respectively. Decreases of 33.5 and 25.3 per cent are found in iron and steel and car building and repairing. The large increases over last year are due to the fact that the figures for last year were affected by the signing of the armistice and the epidemic of influenza.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN NOVEMBER, 1918, AND NOVEMBER, 1919.

Industry.	Estab-lish-ments reporting for Novem-ber, both years.	Period of pay roll.	Number on pay roll in No- vember—		Per cent of increase (+) or de- crease (-).	Amount of pay roll in November—		Per- cent of increase (+) or de- crease (-).
			1918	1919		1918	1919	
Automobile manufacturing...	46	1 week..	121,491	157,661	+29.8	\$3,119,036	\$4,974,783	+59.5
Boots and shoes.....	71	..do.....	50,621	63,569	+12.3	922,484	1,403,470	+52.1
Car building and repairing...	56	½ month	76,992	56,307	-26.9	4,818,950	3,597,519	-25.3
Cigar manufacturing.....	53	1 week..	18,843	17,525	-7.0	287,626	367,317	+27.7
Men's ready-made clothing...	36	..do....	18,782	20,569	+9.5	347,899	586,009	+68.4
Cotton finishing.....	18	..do....	13,730	15,684	+14.2	249,532	340,517	+36.5
Cotton manufacturing.....	53	..do....	48,227	53,953	+11.9	714,700	911,189	+27.5
Hosiery and underwear.....	64	..do....	33,291	34,139	+2.5	445,013	585,280	+31.5
Iron and steel.....	99	½ month	174,320	115,601	-33.7	11,598,124	7,714,218	-33.5
Leather manufacturing.....	34	1 week..	16,159	17,624	+9.1	314,337	426,873	+35.8
Paper making.....	53	..do....	28,931	30,216	+4.4	602,938	737,943	+22.4
Silk.....	50	2 weeks.	14,197	16,901	+19.0	416,816	697,689	+67.4
Woolen.....	50	1 week..	43,432	47,474	+9.3	694,792	986,447	+42.0

The table following shows the number of persons actually working on the last full day of the reported pay period in November, 1918, and November, 1919. The number of establishments reporting on this question is small, and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN NOVEMBER, 1918, AND NOVEMBER, 1919.

Industry.	Establishments reporting for November, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in November—		Per cent of increase (+) or decrease (—).
			1918	1919	
Automobile manufacturing.....	26	1 week....	73,243	106,541	+45.5
Boots and shoes.....	27	do.....	11,904	14,058	+18.1
Car building and repairing.....	53	1 month....	66,458	50,817	-23.5
Cigar manufacturing.....	12	1 week....	3,895	4,136	+ 6.2
Men's ready made clothing.....	5	do.....	4,006	4,360	+ 8.8
Cotton finishing.....	14	do.....	9,442	10,603	+12.3
Cotton manufacturing.....	33	do.....	23,194	26,734	+15.3
Hosiery and underwear.....	24	do.....	14,177	15,397	+ 8.6
Iron and steel.....	77	1 month....	125,897	87,664	-30.4
Leather manufacturing.....	20	1 week....	12,357	13,092	+ 5.9
Paper making.....	23	do.....	16,046	15,884	- 1.0
Silk.....	26	2 weeks....	8,803	10,715	+21.7
Woolen.....	41	1 week....	32,621	37,055	+13.6

Comparative data for November, 1919, and October, 1919, appear in the following table. The figures show that in 12 industries there was an increase in the number of persons on the pay roll in November as compared with October and in one a decrease.

The largest increases in the number of people employed appear in iron and steel, 17.3 per cent; cigar manufacturing, 12.6 per cent; men's ready-made clothing, 5.6 per cent; and silk, 5.1 per cent. A decrease of 1.5 per cent is shown in cotton manufacturing.

In comparing November, 1919, with October of this year, eight industries show an increase in the amount of money paid to employees and five a decrease. The most important increase is one of 20.9 per cent in cigar manufacturing, while iron and steel, men's ready-made clothing, and silk show percentage increases of 17.4, 11.9, and 11.2, respectively. The most important decreases are 4.2 per cent in cotton manufacturing and 2 per cent in automobile manufacturing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN OCTOBER AND NOVEMBER, 1919.

Industry.	Establishments reporting for October and November.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (—).	Amount of pay roll in—		Per cent of increase (+) or decrease (—).
			October, 1919.	November, 1919.		October, 1919.	November, 1919.	
Automobile manufacturing.....	47	1 week.	156,758	157,513	+ 0.5	5,077,859	4,973,797	- 2.0
Boots and shoes.....	71	do....	62,332	63,569	+ 2.0	1,346,625	1,403,470	+ 1.2
Car building and repairing.....	57	1 month.	56,251	56,633	+ .7	3,304,840	3,620,650	+ 9.6
Cigar manufacturing.....	51	1 week.	15,488	17,441	+12.6	301,069	364,042	+20.9
Men's ready-made clothing.....	46	do....	19,964	21,087	+ 5.6	541,177	605,314	+11.9
Cotton finishing.....	17	do....	14,794	15,192	+ 2.7	321,872	331,921	+ 3.1
Cotton manufacturing.....	56	do....	56,185	55,307	- 1.5	974,032	933,185	- 4.2
Hosiery and underwear.....	64	do....	33,896	33,914	+ .1	582,666	580,683	- .3
Iron and steel.....	100	1 month.	113,026	132,576	+17.3	7,573,544	8,888,311	+17.4
Leather manufacturing.....	33	1 week.	17,246	17,380	+ .8	424,765	423,466	- .3
Paper making.....	53	do....	29,602	30,216	+ 2.1	742,997	737,943	- .7
Silk.....	47	2 weeks.	15,513	16,300	+ 5.1	606,272	674,398	+11.2
Woolen.....	48	1 week.	46,470	46,816	+ .7	936,082	970,100	+ 3.6

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for October and November, 1919. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN OCTOBER AND NOVEMBER, 1919.

Industry.	Establishments reporting for October and November.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (—)
			October, 1919.	November, 1919.	
Automobile manufacturing.....	27	1 week....	108,386	106,744	- 1.5
Boots and shoes.....	27	do....	12,473	13,491	+ 8.2
Car building and repairing.....	54	1 month....	51,480	51,129	- .7
Cigar manufacturing.....	13	1 week....	4,642	4,676	+ .7
Men's ready-made clothing.....	4	do....	3,820	3,825	+ .1
Cotton finishing.....	14	do....	10,862	11,012	+ 1.4
Cotton manufacturing.....	34	do....	26,921	27,090	+ .6
Hosiery and underwear.....	23	do....	15,329	15,421	+ .6
Iron and steel.....	82	1 month....	88,343	103,958	+17.7
Leather manufacturing.....	18	1 week....	12,672	12,839	+ 1.3
Paper making.....	25	do....	16,527	16,434	- .6
Silk.....	30	2 weeks....	11,093	12,507	+12.7
Woolen.....	45	1 week....	37,645	37,900	+ .7

Changes in Wage Rates.

During the period October 15 to November 15, 1919, there were increases in all of the 13 industries. Of the establishments report-

ing, many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

Automobile manufacturing: One plant reported an increase of approximately 10 per cent, but made no other statement. In one firm 1.8 per cent of the people received 8.3 per cent increase in wages. Five per cent of the men in one establishment received an increase of 6 per cent. One concern granted a 4 per cent increase to 9 per cent of the employees, and another shop gave an increase of 1.89 per cent to 43.3 per cent of the force. All of the men in one plant received an increase of 1 per cent. Two concerns reported a few individual increases.

Boots and shoes: One concern gave an increase of 29 per cent to 5 per cent of the pieceworkers and 12 per cent to 14 per cent of day help. About 25 per cent of the employees in one plant received a 25 per cent of the pieceworkers and 12 per cent to 14 per cent of day affecting 15 per cent of the men in one, and 10 per cent in the other. An increase of 23 per cent to $8\frac{1}{2}$ per cent of the force was granted by one firm. Twelve per cent of the employees in one concern received an increase of 18 per cent, while one establishment gave an increase of $12\frac{1}{2}$ per cent to 20 per cent of the force. Two plants reported a 2 per cent increase affecting 3 per cent of the men in each. One firm reported an increase but gave no further data.

Car building and repairing: One car building shop granted a $12\frac{1}{2}$ per cent increase to $16\frac{2}{3}$ per cent of its employees. Several increases were reported by the railroads in accordance with the national agreement made valid by the Director General of Railroads.

Cigar manufacturing: One establishment reported a 33 per cent increase to 90 per cent of the force. Increases ranging from $4\frac{1}{2}$ to $27\frac{1}{4}$ per cent affecting 70 per cent of the employees were given by one firm. All of the men in one concern received an increase of 25 per cent. Two factories reported a 20 per cent increase, affecting all of the employees in one firm and 90 per cent of the men in the other; this second firm also gave an increase of 10 per cent to 10 per cent of its employees. Four concerns gave an increase of 10 per cent, affecting all of the force in two plants, 95 per cent of the men in the third, and 40 per cent of the employees in the fourth. Sixty per cent of the help in one factory received a 5 per cent increase. One concern reported an increase to all of its men but made no statement concerning the percentage of the increase.

Men's ready-made clothing: One establishment reported increases ranging from 10 to 25 per cent affecting 75 per cent of the force. All of the employees in one concern received an increase of about 15 per cent. One plant granted a \$6 per week increase to all of the force. One establishment that reported an average increase of \$5 per week

gave no further data, and four other concerns granted an increase of \$5 per week, affecting all of the men in two establishments, 90 per cent of the employees in the third establishment, while the fourth failed to mention the proportion of the force affected.

Cotton finishing: One concern reported an increase of 10 per cent affecting 5 per cent of the employees.

Cotton manufacturing: All of the men in one establishment received an increase of $12\frac{1}{2}$ per cent and all of the force in another plant were increased about 10 per cent.

Hosiery and underwear: One mill gave a 75 per cent increase to 15 per cent of the force, while another concern granted an increase of 5 per cent, but failed to state the number affected. One plant reported an increase but made no other statement.

Iron and steel: One plant granted a 10 per cent increase to 40 per cent of the force, while another concern gave increases ranging from 5 to 10 per cent which affected 5 per cent of the employees. One mill increased the 40 per cent bonus to 55 per cent, affecting all employees except bar mill rollers, heaters, and brick masons, and also gave a 9 per cent increase to 98.1 per cent of the force. Twenty per cent of the men in one plant received an increase of 6 per cent.

Leather manufacturing: An increase of 10 per cent affecting $1\frac{1}{2}$ per cent of the men was reported by one establishment and another firm gave a 7 per cent increase to 80 per cent of all female employees.

Paper making: One establishment granted an 8 per cent increase to 97 per cent of the force. One firm reported increases of 10 to 25 cents per day affecting 10 per cent of the force. One concern gave several individual increases.

Silk: An increase of 20 per cent to $66\frac{2}{3}$ per cent of the employees was reported by one firm. Three concerns gave 10 per cent increases affecting all of the men in one, 10 per cent of the force in the second, but the third failed to state the per cent of the employees affected. All of the men in one establishment received an increase of about 10 per cent. Eighty-two per cent of the force in one firm received a 9 per cent increase and about 18 per cent of the men in another mill received an increase of approximately 9 per cent. Two factories granted an increase of 7 per cent to 30 per cent of their force. One concern gave 90 per cent of the force a 5 per cent increase, and in another mill all hands were increased \$1 per week.

Woolen: One firm reported a 10 per cent increase to 10 per cent of the employees.

Report of Employment Exchanges in the United Kingdom.

AS REPORTED by the British Labor Gazette for November, 1919, the operations of the employment exchanges for the five weeks ending October 10, 1919, are summarized as follows:

The average daily number of registrations, of vacancies notified, and of vacancies filled during the five weeks was 15,781, 5,376, and 3,628, respectively.

Compared with the previous month, the daily average of registrations showed an increase of 11 per cent, while the daily average of vacancies notified and vacancies filled showed decreases of 13.6 per cent and 14.3 per cent, respectively. The marked increase in the number of registrations was due to the unemployment caused by the railway strike and the molders' dispute. Concurrently with an increase in applications for work there were decreases in the daily average number of vacancies notified and vacancies filled.

In the principal occupational groups the daily average number of applications from adults was 13,867—10,298 men and 3,569 women. There were 4,396 vacancies reported—2,340 men and 2,056 women. The average daily number of positions filled was 3,628. When compared with the previous month there was a decline of 16 per cent among men and 5 per cent among women.

The occupational groups in which there were the largest number of positions filled by men were: Engineering, shipbuilding, and construction of vehicles, 21 per cent; building, 20 per cent; and transport, 10 per cent. Sixteen per cent were general laborers. Over 50 per cent of the women were placed in domestic service, 9 per cent in agriculture, and 6 per cent in textiles.

As regards juveniles, the daily average of registrations was 1,914, while that of vacancies notified was 980. The daily average number of vacancies filled during the month as compared with the previous month showed a decrease of 24 per cent.

Volume of Employment in the United Kingdom in October, 1919.

THE following figures as to the condition of employment in Great Britain and Ireland in October, 1919, as compared with September, 1919, and October, 1918, have been compiled from figures appearing in the British Labor Gazette for November, 1919. Similar information for July was published in the October LABOR REVIEW.

In comparing October, 1919, with September, 1919, relative to the number of employees, respective increases of 4, 3.2, 3.1, and 3 per cent are shown in glass, cement, corset, and lace trades. The largest decreases—5.7 and 4.8 per cent—appear in iron and steel and seamen.

The aggregate earnings of employees in October, 1919, as compared with September, 1919, show increases in every industry. The worsted, glass, pottery, and woolen trades show respective percentage increases of 8.2, 7.9, 6.7 and 6.6.

In October, 1919, as compared with October, 1918, as to the number of persons employed, dock and riverside labor shows an increase of 72.4 per cent; the cement trade, an increase of 69.7 per cent; the food preparation trades, an increase of 40.1 per cent; quarrying, an increase of 38.6 per cent; and the printing trade, an increase of 38.4 per cent. The largest decrease—5.6 per cent—appears in iron and steel.

Comparing October, 1919, with October, 1918, on the question of earnings of employees, increases of 71.6, 71.2, 68.2, 65.6, and 63.5 per cent are shown in cement, cotton, food preparation, printing, and brick trades, respectively. Fourteen trades show increases ranging from 26.6 to 60.6 per cent, while linen shows an increase of 6.8 per cent, and the tailoring trade, an increase of 1 per cent. There were no decreases during the period mentioned.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN OCTOBER, 1919, AS COMPARED WITH SEPTEMBER, 1919, AND OCTOBER, 1918.

[Compiled from figures in the Labour Gazette, London, November, 1919.]

Industries and basis of comparison.	Per cent of increase (+) or decrease (—) in October, 1919, as compared with—		Industries and basis of comparison.	Per cent of increase (+) or decrease (—) in October, 1919, as compared with—	
	Sept., 1919.	October, 1918.		Sept., 1919.	October, 1918.
Coal mining:			Other clothing trades:		
Average number of days worked.....	—0.4	— 1.4	Dressmaking and millinery—Number of employees.....	+1.6	+28.2
Number of employees.....	+ .9	+23.0	Wholesale mantle, costume, blouses, etc.—Number of employees—		
Iron mining:			London.....	—1.3	+ 2.6
Average number of days worked.....	—1.7	— .5	Manchester.....	+2.2	+ 2.6
Number of employees.....	+2.1	+ 4.0	Glasgow.....	(²)	+ 5.6
Quarrying:			Corset trade—Number of employees.....	+3.1	+19.5
Average number of days worked.....	—5.4	— 2.2	Woodworking and furnishing:		
Number of employees.....	+ .2	+38.6	Number of employees ¹	+ .3	(¹)
Pig iron: Number of furnaces in blast.....	(¹)	—20.5	Brick trade:		
Iron and steel works:			Number of employees.....	+ .4	+36.1
Number of employees.....	—5.7	— 5.6	Earnings of employees.....	+1.4	+63.5
Number of shifts worked.....	—5.5	— 9.3	Cement trade:		
Tin plate, steel, and galvanized sheet trades: Number of mills in operation.....	+5.5	+44.9	Number of employees.....	+3.2	+69.7
Cotton trade:			Earnings of employees.....	+4.0	+71.6
Number of employees.....	+1.5	+20.1	Paper, printing, and bookbinding trades:		
Earnings of employees.....	+2.4	+71.2	Paper trades—		
Woolen trade:			Number of employees reported by trade-unions.....	(¹)	(¹)
Number of employees.....	+ .8	+ 9.8	Number of employees reported by employers.....	+1.5	+18.9
Earnings of employees.....	+6.6	+39.7	Earnings of employees reported by employers.....	+2.2	+55.0
Worsted trade:			Printing trades—		
Number of employees.....	+1.4	+10.7	Number of employees reported by trade-unions ²	— .3	— 1.2
Earnings of employees.....	+8.2	+46.4	Number of employees reported by employers.....	+2.4	+38.4
Hosiery trade:			Earnings of employees reported by employers.....	+4.3	+65.6
Number of employees.....	+ .7	+ 5.1	Bookbinding trades—		
Earnings of employees.....	+3.2	+26.6	Number of employees reported by trade-unions ²	+ .3	— 1.9
Jute trade:			Number of employees reported by employers.....	+1.2	+25.1
Number of employees.....	— .6	+ 3.2	Earnings of employees reported by employers.....	+1.4	+40.9
Earnings of employees.....	+ .5	+31.9	Pottery trades:		
Linen trade:			Number of employees.....	+1.9	+12.1
Number of employees.....	+ .4	— 2.1	Earnings of employees.....	+6.7	+52.5
Earnings of employees.....	+ .8	+ 6.8	Glass trades:		
Silk trade:			Number of employees.....	+4.0	+34.8
Number of employees.....	+1.0	+ 8.9	Earnings of employees.....	+7.9	+60.6
Earnings of employees.....	+ .9	+34.1	Food-preparation trades:		
Carpet trade:			Number of employees.....	+ .8	+40.1
Number of employees.....	+2.7	+28.9	Earnings of employees.....	+2.1	+68.2
Earnings of employees.....	+2.7	+52.1	Dock and riverside labor: Number of employees.....	—2.0	+72.4
Lace trade:			Seamen: Number of employees.....	—4.8	+20.5
Number of employees.....	+3.0	+21.3			
Earnings of employees.....	+4.6	+47.3			
Bleaching, printing, dyeing, and finishing:					
Number of employees.....	+1.7	+13.3			
Earnings of employees.....	+2.8	+44.2			
Boot and shoe trade:					
Number of employees.....	+1.2	+17.2			
Earnings of employees.....	+3.0	+40.5			
Leather trades: Number of employees ³	(²)	— 0.6			
Tailoring trade:					
Number of employees.....	+1.7	+ .7			
Earnings of employees.....	+ .4	+ 1.0			
Shirt and collar trade:					
Number of employees.....	+1.9	+14.5			
Earnings of employees.....	+2.9	+29.8			

¹No report.

²Based on unemployment.

³No change.

Employment of Disabled ex-Service Men in Great Britain.

THROUGH a royal proclamation the British Government recently launched a new scheme for the employment of disabled ex-service men having for its primary object a more rapid absorption into industry of men disabled in the war by means of a closer cooperation of employers. Any employer who engages to adopt this plan will have his name enrolled upon a national list called the "King's National Roll" and is entitled to use upon his correspondence an official device "indicating that he recognizes the national obligation to the disabled and that his share therein is gladly undertaken." The scheme, which is reminiscent of the citation awarded by the United States War and Navy Departments to employers guaranteeing to reemploy 100 per cent of their former employees who had entered the service, is said to be an application of the "Rothband scheme" and "Rotherham scheme," from the former of which it derives the "National Roll" and the royal appeal; from the latter the 5 per cent limit and the correspondence device.

Briefly summarized the scheme as adopted is as follows:

Every employer in the United Kingdom who employs 10 or more workers is asked to undertake to employ as many disabled ex-service men as possible, with a minimum of 5 per cent of his total establishment. Those employers who can absorb more than 5 per cent are strongly urged to do so. Employers may count toward their percentage any disabled men already in their employ or in training in their premises, and also any vacancies they have guaranteed to the Ministry of Labor to leave open for disabled men in training elsewhere. The special percentages to be adopted for particular trades have been indicated by the advisory central bodies, but where such action has not yet been taken, or where the recommendation issued does not fit local circumstances, local technical advisory committees will prescribe the percentage.¹

As indicated in the summarization of the scheme, the plan has been discussed with a majority of the staple trades in Great Britain. By some it has been adopted as it stands, while others have accepted it with modifications.

No dilution of skilled labor is contemplated by the adoption of this scheme, nor does it vitiate any arrangements regarding training already existing between the Ministry of Labor and the trade advisory committees. It is suggested that the eligibility of disabled men for training be decided upon through agreements between employers and trade-unions. In case the training given in institutions for this purpose is insufficient to meet the requirements of any trade the Min-

¹ The Labour Gazette, London, September, 1919, p. 371.

ister of Labor may require the employer to furnish training in his own establishment for the positions guaranteed by him.

In order that there shall be no detrimental effect upon existing rates of wages "the wages of trained disabled men will," according to the royal proclamation, "be fixed according to agreements made on their behalf with the trade advisory committee. With regard to untrained disabled men on work not normally performed by skilled men, wages will be fixed by the special arrangements in operation for the settling of wages questions in trades where such arrangements exist, and in other trades disabled men should, generally speaking, receive the district rate of wages. Exceptional cases in which the earning capacity of the disabled man is abnormally reduced may, in the last resort, be referred to the local technical advisory committee, the local employment committee, or the appropriate trade body. In no case must the possession of a disability pension be taken into account in computing the rate of wages."¹

The proclamation further points out that "a 'disabled man' is, technically speaking, (a) any man in possession of a disablement pension, (b) any man who has received from the Ministry of Pensions a gratuity for a minor disablement or aggravation of a complaint, and who is adjudged by the local employment committee to be incapacitated, either wholly or in part, from following his normal occupation."²

Since the publication of the royal proclamation the scheme has been extended to undertakings in which fewer than 10 workers are employed, thus reaching every employer of labor in the United Kingdom. From the last report—November 4, 1919—5,088³ firms have adopted the scheme, interest in which is rapidly increasing. These firms employ 725,000 workers and have agreed to give positions to 46,000 disabled men.

Among the important branches of industry in which this method of placing disabled soldiers is being tried out are: 24 municipalities; 6 electrical works; 5 tramways; 12 gas companies; 4 newspapers; 6 shipping companies; 7 engineering firms; 6 provision firms; 5 clothing and boot manufacturers; and 4 printing establishments. Some of the firms are now establishing training centers for the men they wish to employ.

In the civil service, apart from the industrial departments, the number of disabled men employed on October 27, 1919, had passed the established 5 per cent, and Sir Robert Horne, the minister of

¹ Manchester (England) Guardian, Sept. 15, 1919, p. 7.

² Idem.

³ Great Britain. Ministry of Labor. Month's Work, November, 1919, p. 83.

labor, estimated that by December 1 it would be at least 8 per cent of the total number employed. In the industrial departments of the Government the number of disabled men employed is not definitely known, but available information indicates that it is over 5 per cent. The railways have not been able to guarantee employing a definite percentage of disabled men, but they have taken on from 3 to 4 per cent of them in addition to the number of their own men who are being reabsorbed into the service.

WOMEN IN INDUSTRY.

Women in the Government Service.¹

FOR many years people interested in securing equality of opportunity for woman workers have felt that this equality did not exist in the Government service, the place above all others where every citizen of the country should be assured of equal opportunity. Because of the tremendous influx of women into new occupations during the war, and the consequent general recognition of their abilities along many different lines, it was felt that the time was ripe for discovering to what extent the new attitude toward woman workers had penetrated the various branches of the Government service. With this object in view the Women's Bureau of the United States Department of Labor arranged to make a study of positions in the Government service open by examination to women as compared with those closed to women. The study was begun in September, 1919. Part I, which emphasizes the fact that women were excluded from 60 per cent of the examinations held from January 1, 1919, to June 30, 1919, was completed on October 16, and submitted to the Civil Service Commission on October 27.

On November 5, 10 days after receiving the report, the Civil Service Commission passed a ruling opening all examinations to both women and men, leaving it to the discretion of the appointing officers to specify the sex desired when requesting certification of eligibles.

On November 19, a bill was introduced in the Senate by Senator McLean, of Connecticut, amending the statute now in force which dates back to 1870 and provides that at the discretion of the head of any department women may be appointed to any clerkship in the Government service. The amendment provides that in requesting a register of eligibles for appointment the nominating and appointing officials shall not specify sex unless sex is a physical barrier to the proper performance of the duties to be fulfilled.

Thus one of the ends desired has already been almost completely accomplished. Once the facts were assembled the rapidity with

¹ This summary of the report on women in the Government service by the Women's Bureau of the United States Department of Labor was prepared by that bureau.

which the remedy was supplied gives rise to a hope that Part II of the report, showing an equally serious discrimination in the matter of appointments and entrance salaries, may have as satisfactory a result.

The entire report was submitted both to the Civil Service Commission and to the Joint Commission on Reclassification of Salaries. A subcommittee of the latter on the employment conditions of women in the civil service has incorporated the material in its report to the committee on employment policies which has been adopted and passed on to the commission.¹

Exclusion of Women from Examinations.

The largest employer of labor in the country and the employer of the greatest variety of labor, the United States Government, has as its employment agent the Civil Service Commission. This commission is responsible for securing the proper person for almost every position in the Government service except those of unskilled labor, in some States, and those filled by presidential appointment. The appointment of women to any Government position is still regulated by a statute written in 1870 which declared that women may in the discretion of the head of any department be appointed to any of the clerkships therein authorized by law. From this statute has sprung the custom of opening examinations to both sexes or closing them to either sex at the discretion of the head of any department, regardless of the fact that neither rule nor law covers the examination itself. When a vacancy occurs for which the Civil Service Commission has no register of eligible persons, the head of the bureau in which the vacancy occurs informs the Civil Service Commission of its needs, indicating whether a man or a woman is desired for the position or whether no discrimination will be made. The decision in this matter is based upon the needs of the particular bureau. Barring women or men from any examination, however, bars them not only from the special occupation for which the examination is given but from all kindred occupations. All other bureaus which may require services of the same or like quality as those specified in the examination are confined to a register made up exclusively of one sex when the opposite sex might be as acceptable or preferable; or they must ask for a special examination in which no sex line is drawn; or they must seek the woman or man desired among those already in the Government service. The bureau asking for the examination in the first instance may, without question, require the services of men only or

¹ This article summarizes the report of conditions as found during the period covered and, of course, takes no account of the recent ruling of the Civil Service Commission.

women only, but by closing the examination to either sex, all other bureaus are restricted in the choice of service or forced to call for special examinations entailing an additional expenditure of time and money.

From January 1, 1919, to June 30, 1919, the Civil Service Commission held examinations to obtain eligible people for vacancies in 260 different types of positions, exclusive of manufacturing and mechanical positions in the ordnance factories, quartermaster depots, and navy yards, and exclusive of unskilled labor positions.¹ Women were excluded from examinations for 59.6 per cent of these occupations, tests for 155 of the occupations being open to men only. In the scientific and professional positions women were excluded from examination for over 64 per cent of the positions. In the mechanical and manufacturing services 87 per cent of the occupations were closed to women. Tests for clerical services of all kinds, however, except seven (15.9 per cent) were open to women. Of the 260 occupational examinations, the per cent closed to women, distributed according to service for which examinations were held, was found to be as follows: Biological science, 61.5; physical science, 64.5; medical science, 75; engineering, 67.5; economic and sociological, 100; miscellaneous professional (editorial work, teaching, and nursing), 30; managerial and other expert office service, 25; clerical, 15.9; mechanical and manufacturing, 87; domestic, reformatory, and rural, 83.3. Nearly 38 per cent of the examinations were open to men and women; 2.7 per cent to women only; and 59.6 per cent to men only.

Character of Examinations Closed to Women.

With more than 800,000 women in scientific or professional pursuits outside the Government service, with more than 2,000,000 women working in private manufacturing and mechanical establishments, with over 600,000 in clerical occupations in private employ, the question naturally arises as to what is the character of the Government work in which women are not allowed to participate.

During the first six months of 1919, examinations were held for 33 occupations involving field and laboratory experimentation. Women were permitted to take examination to conduct or assist in the conduct of experiments in food preparation in materials requisite to the home, in fertilizers and soils, in horticulture, plant diseases, cereal diseases, injurious and beneficial plant worms, fiber production, paper fibers, and for the conduct of experiments on materials

¹ The number of examinations held always outnumbers the different kinds of positions for which examinations are given, because it is often necessary to repeat tests at intervals in order to secure the necessary number of qualified people.

and devices suitable for naval uses. But they were not permitted to take tests for the conduct of investigations relating to animal parasites, to the mechanical properties of wood, to drug and oil plant cultivating, to tobacco breeding, to the introduction of new plants, to the relation of climates to agriculture, to aeronautics, to oil and gas field conditions, to colors and dyes, or to study the physiology of gas poisoning.

Women are permitted to study human diseases and plant diseases, but the Bureau of Animal Industry excludes them from its 1919 examinations for investigating animal parasites and performing administrative work in that connection.

The Navy Department was willing to use either men's or women's knowledge to secure materials and devices most suitable for naval uses, but the Forest Service wanted only men to determine the physical and mechanical properties of wood, and women were therefore excluded from the examination.

Women are acting as assistant weather observers for the Weather Bureau, and assistant horticulturists for the Department of Agriculture, but they are not permitted to take tests in climatology in its relation to agriculture. They are testing foods and drugs to determine their nutritive and medical quantities, but they are barred from examination in the testing of dyes.

The Harvard Medical School has recognized the value of one woman doctor's studies in industrial poisoning by appointing her assistant professor of industrial medicine. But our Government delegates to men only the study of the effects of gas poisoning.

As to the work of collecting information from original sources, out of examinations in the first half of 1919 for 16 different kinds of positions, 4 were open to women. If qualified, a woman may collect and compile information concerning shipments, receipts, and prices of food products in producing centers and large markets or may investigate methods and costs of marketing food products; she may collect or aid in collecting statistics on the production, consumption, and movement of mineral commodities in world trade; or she may assist in making surveys to determine the prevalence, causation, and prevention of human diseases. But the examinations bar her from securing the latter information if the position calls for a graduate of a medical college and carries with it the responsibility of recommending preventive and controlling measures. By the same policy she is kept from collecting information on the acreage conditions and yields of the various crops, or data regarding farm animals, nor may she investigate the volume and movement, the marketing and distribution, the supply and consumptive demand of foreign trade in farm

and nonmanufactured food products as long as the 1919 register of eligible men is still good. Investigating matters relating to the organization and operating of cooperative food producers' associations is also a closed field for women's service. The Bureau of Efficiency, by calling for men only in its 1919 examination, excludes women from conducting any of its investigation into the organization and procedure of Government departments. Less unusual is the Bureau of Mines' exclusion of women from investigating causes of accidents.

Women have acted and are acting as aids in restoring our handicapped and disabled sailors and soldiers to a normal frame of mind; they have taught and are teaching boys how to do mechanical tasks with their dismembered hands and arms; they are being employed as well as men for private and public employment offices. The Federal Board for Vocational Education, however, has believed that men are best able to learn of the desires and latent capabilities of our boys; that men only can advise and assist them in securing suitable training and employment; that men only have a knowledge of trades and systems of vocational education. All the examinations for such important service, are, therefore, open only to men.

All but two of the examinations given in the first six months of 1919 for inspection and law enforcement positions were closed to women. The food and drug inspection station at San Francisco permitted women to take the test for examining official samples of food and drugs, but in 1919 the Bureau of Chemistry at Washington excluded women from the tests for inspecting proprietary medicines or foods and drugs in general. Meat and live-stock inspection, disinfection of foreign seeds and plants, inspection of wood warehouses, and enforcement of our horticultural and game laws can only be done by men while the present register of eligibles holds good. Women may, if qualified, examine requests for patents in our Patent Office along with men, but they may not search or examine patents for the Purchase, Storage, and Traffic Division of the War Department if they must take an entrance examination for the position.

The Navy Department has recognized the value of women as draftsmen, since all its examinations, whether for general engineering work or for specific lines of aeronautical, ordnance, ship, electrical, radio, or buildings drafting, may be taken by either men or women. Other divisions, as the Engineers' Department and Patent Section of the War Department, the National Advisory Committee for Aeronautics, and the Bureau of Public Roads, did not admit women to draftsman examinations.

Some of the positions listed above from which women were excluded in the examinations given in the first six months of this year are undoubtedly such that their duties can be performed more satisfactorily by men than by women; for other positions there may be no women with sufficient experience to qualify. But a careful study of the exclusions indicates very clearly that the majority of scientific and professional positions which women were not permitted to enter in some departments are very similar in character to work women are doing and have done in other Government departments or in private establishments.

As long as it remains customary to permit any examination to be closed to one or the other sex because of the needs of one bureau the Civil Service Commission will not be able to marshal all available ability before the department appointment officials for choice.

With all examinations opened to persons of either sex, the country would know what storehouses of training and experience it had to draw from, the appointment officials would have a wider field from which to choose, and the women of the country would have their opportunities for service immeasurably increased.

Entrance Salaries of Women Compared With Those of Men.

The discriminating policy that prevailed in examinations up to November 5, resulting in barring women from a large proportion of the higher grades of service, is reflected naturally in the positions to which women are appointed and in the relative salary levels. One outcome of vital bearing is the overwhelming concentration, 91 per cent, of woman appointees in the clerical service. This massing in turn carries with it the depression of salaries toward the old-time woman's level, a figure traditionally below that which any number of men qualified to fill the positions will accept.

In order to get definite facts as to the entrance salaries of women compared with those of men, a study was made of the salaries paid to persons appointed to the Government service during the months of January and February, 1919. With the exception of persons working for nominal salaries or persons whose salary was paid in part only by the United States, and with the exception of manufacturing, mechanical, and unskilled laboring positions outside of Washington and similar positions in Washington to which no women were appointed, all appointments, whether for the departmental service in Washington, or for the field service, in the ten departments and under seven commissions were included in the study.

In the first two months of 1919, 7,959 appointments, exclusive of those specified above, were made to the Government service. Of

these 4,689 (58.9 per cent) were women and 3,270 (41.1 per cent) were men. The positions filled during this period ranged from charwoman to Federal Trade Commissioner. The salaries ranged accordingly from \$240 a year to \$19,000 a year; but the majority of appointees received neither one extreme nor the other. Over 86 per cent of all women were appointed at salaries ranging from \$900 to \$1,299 a year. Only 36 per cent of the men were appointed to positions at these salaries.¹

The following table shows the number and per cent of women and men entering the Government service during the first two months of 1919, classified according to entrance salaries and character of appointment:

NUMBER AND PER CENT OF WOMEN AND MEN RECEIVING APPOINTMENTS IN THE GOVERNMENT SERVICE AT EACH SPECIFIED ENTRANCE SALARY DURING JANUARY AND FEBRUARY, 1919, BY CHARACTER OF APPOINTMENT.

Salary group.	Probational.		Temporary.		Excepted. ¹		Total.		Per cent.	
	Wo-men.	Men.	Wo-men.	Men.	Wo-men.	Men.	Wo-men.	Men.	Wo-men.	Men.
Under \$600.....	143	93	51	112	8	2	202	207	4.3	6.3
\$600 and under \$700.....	42	45	28	48	2	3	72	96	1.5	2.9
\$700 and under \$800.....	37	89	23	101	2	3	62	193	1.3	5.9
\$800 and under \$900.....	42	56	10	19	7	1	59	76	1.2	2.3
\$900 and under \$1,000.....	206	42	118	82	19	4	343	128	7.3	3.9
\$1,000 and under \$1,100.....	730	150	151	112	7	5	888	267	18.9	8.2
\$1,100 and under \$1,200.....	1,956	289	47	72	6	3	2,009	364	42.8	11.2
\$1,200 and under \$1,300.....	534	203	239	161	37	60	810	424	17.3	13.0
\$1,300 and under \$1,400.....	36	39	32	35	1	12	69	86	1.6	2.6
\$1,400 and under \$1,500.....	51	85	13	34	3	3	67	122	1.5	3.7
\$1,500 and under \$1,600.....	16	112	19	117	.....	57	35	286	.7	8.8
\$1,600 and under \$1,700.....	10	56	7	57	.....	6	17	119	.4	3.6
\$1,700 and under \$1,800.....	.....	3	.....	5	.....	.....	.....	8	.....	.2
\$1,800 and under \$1,900.....	12	161	7	71	2	30	21	262	.5	8.0
\$1,900 and under \$2,000.....	1	12	3	8	.....	3	4	23	.1	.7
\$2,000 and under \$2,100.....	2	34	5	39	.....	31	7	104	.2	3.2
\$2,100 and under \$2,200.....	.....	8	.....	12	1	4	1	24	(²)	.7
\$2,200 and under \$2,300.....	.....	27	.....	6	.....	7	.....	40	.....	1.2
\$2,300 and under \$2,400.....	.....	4	.....	1	2	.....	2	5	(²)	.2
\$2,400 and under \$2,500.....	.....	15	3	30	3	13	6	58	.1	1.8
\$2,500 and under \$2,600.....	.....	40	6	64	.....	11	6	115	.1	3.5
\$2,600 and under \$2,700.....	.....	35	4	80	3	48	7	163	.2	5.0
\$2,700 and under \$2,800.....	.....	9	.....	24	1	11	1	44	(²)	1.3
\$2,800 and under \$2,900.....	.....	4	.....	10	1	19	1	33	(²)	1.1
\$2,900 and under \$3,000.....	.....	4	.....	6	.....	13	.....	23	.....	.7
\$3,000 and over.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	3,818	1,615	766	1,306	105	349	4,689	3,270	100.0	100.0

¹ Excepted appointments are those to positions which are excepted from examination by law or by executive order.

² Less than one-tenth of 1 per cent.

The table shows very clearly that as the salary advances the proportion of woman appointees receiving it decreases very rapidly. Only 4.7 per cent of the women as compared with 26.9 per cent of the men were engaged at rates ranging from \$1,300 to \$1,899. Posi-

¹ The proportion of men and women receiving the higher salaries is greater in positions which are excepted from civil-service examination and in temporary positions. Only 18.6 per cent of the woman appointees received excepted or temporary appointments, whereas 50.6 per cent of the men received these kinds of appointments.

tions carrying from \$1,900 to \$2,499 went to less than one-half of 1 per cent of the women, but to nearly 8 per cent of the men. Twenty-five hundred dollars but under \$3,600 a year was paid to less than one-third of 1 per cent of the women but to 8.5 per cent of the men; while \$3,600 a year and over was received by only two women, or less than one-tenth of 1 per cent of the woman appointees, whereas 100, or over 3 per cent of the men appointees, received over \$3,600 a year. As a whole, therefore, about 46 per cent of the men, as compared with slightly over 5 per cent of the women, received more than \$1,299 a year, in spite of the fact that the prevailing policy of appointing men as messengers resulted in twice as large a proportion of men as women being paid less than \$900 a year.

The concentration of women's appointments within the \$900 and under \$1,300 group corresponds closely with the concentration of their appointment within the clerical services, as stated in the opening paragraph of this section. Ninety-one per cent of the 4,689 women appointed in January and February of 1919 went into clerical occupations of one type or another. Forty-eight and one-half per cent of the men's appointments were made to these positions. Even within the clerical group concentration of the sexes occurs. Men predominate in the supervisory positions, in those requiring special training and experience, and, at the other end of the scale, as office messengers. Women predominate as stenographers, typists, and in index, filing, statistical, and other kinds of general office work.

The fact that influences other than the numbers of men and women available for the particular positions are at work in determining whether clerical work shall be done by a man or a woman is shown by an analysis of the number of people of each sex passing the examination, when compared with the proportion of positions filled by each sex.

In the first six months of 1919, 59 per cent of the persons passing the clerical tests were women, whereas 72 per cent of the appointments in the first two months of 1919 were women.

This discrepancy is largest among persons holding clerk positions, that is, persons who have passed the general clerk examination in spelling, arithmetic, penmanship, letter writing, and copying and correcting manuscript, and who are assigned to various office positions throughout the Government service. With a slightly larger number of men passing these examinations than women, 80 per cent of the positions were filled by women. For file and cataloguing clerk positions 74.5 per cent of the successful applicants were women although 84 per cent of the vacancies were filled by women. Eighty-six and one-half per cent of the positions in which various office appli-

ances are used were filled by women although they constituted but 81 per cent of those passing the examinations. Only in stenographic and typewriting positions do the percentage of appointments of woman eligibles fall within three points of each other. When special training is required the situation is reversed. Almost 30 per cent of the eligibles were women while only 15 per cent of the positions were filled by women. Approximately the same ratio between eligibles and appointments existed in the messenger service.

Another condition that appears to influence the proportion of men and women appointed to various positions is the weaker bargaining power of women. All applicants for probational positions state in their examination papers the minimum salary which they will accept. With the exception of messenger positions and card perforation machine operator positions the minimum salary advertised by the Civil Service Commission for clerical positions is \$900 a year. Among the applicants for probational clerical appointments in the months of January and February, 274 women as against 36 men agreed to accept the minimum offered or less; among the temporaries 131 women and 66 men agreed to accept \$900 or less; and as to the excepted positions at this salary or less 21 women and 1 man agreed to accept them. In other words, of the 529 applicants who expressed willingness to accept the advertised minimum or less, over 80 per cent were women.

A study of the relative salaries prevailing in this clerical group where the numbers emphasized are the largest, also bears witness to the weaker bargaining power of women. Although the salary received by the largest single group of people doing clerical work of a varied nature fell between \$1,100 and \$1,199 for both men and women, 36 per cent of the male appointees received more than this amount as against 16 per cent of the female appointees. The highest salary for a man in this group was \$2,400, for a woman \$1,800 a year. In the minor clerk positions, the largest single group of women received from \$1,000 to \$1,099 per year. A similar group of men got from \$1,200 to \$1,299 per year. The prevailing rate for woman typists was \$1,000 to \$1,099, for man typists between \$1,100 and \$1,199. Stenographers of both sexes received \$1,200 to a larger extent than any other salary. A slightly larger proportion of man than woman stenographers received over this amount.

Under clerical work requiring special training and experience and original thought are included law clerks, correspondence clerks, and clerks especially qualified to be intrusted with special kinds of office work. Although 14 women passed the law-clerk examination, none was appointed to this position during January and February of 1919.

They were appointed as correspondence clerks and special experts in the Bureau of War-Risk Insurance at salaries ranging from \$1,100 to \$2,000. Men taking the same positions received from \$1,200 to \$3,500.

As to the positions requiring education and experience, few women were appointed to managerial, supervisory, office organizing, or secretarial positions. Of the 15 women receiving such positions, only one earned an amount commensurate with the responsibility supposedly involved in these positions. The others received \$1,200, \$1,400, and \$1,600. Some men received the low rates that women did, but over half received \$2,000 and over.

As statisticians, work requiring college graduation and some practical experience, women accepted positions at \$1,200, \$1,800, and \$2,000. Men secured \$1,800, \$3,000, and \$4,000 jobs. Of the four women taking positions as verifiers of income and excess profit tax returns, two received \$1,400, one \$1,800, and one \$2,000. Nine men appointed to these positions received less than \$1,400, but 103 received over \$2,000.

A further study of the appointments of women as scientific investigators, collectors of statistical data, or in other positions requiring education and experience, shows the same condition. In the majority of the occupations to which women and men were appointed in any numbers, although men frequently received lower entrance salaries than women, the proportion of man appointees to the higher paid positions in each occupation was always in excess of the proportion of woman appointees to these positions.

Not until the entrance salaries to be paid in each occupation are fixed for probational, temporary, and excepted positions in accordance with the responsibilities and difficulties of the tasks to be undertaken, not until the classes of work within each occupation are so well determined and their salaries fixed so that the persons marking examination papers will be able to mark each applicant's class and salary status on the examination paper, will it be possible to eliminate the inequalities which have arisen through custom in the beginning salaries offered to women and men.

INDUSTRIAL ACCIDENTS.

New Basis for Measuring Accident Frequency and Severity Rates.

AT A meeting of the committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions held at Harrisburg, Pa., December 3 to 5, 1919, the following resolution was adopted changing the unit for measuring both accident frequency and accident severity rates:

Resolved, That accident rates, both frequency rates and severity rates, be computed on the basis of 1,000 hours' exposure instead of 3,000 hours' exposure, as heretofore.

The unit of measure for both frequency and severity accident rates, which has come to be generally used, is the "300-day worker," sometimes called "full-time worker." This hypothetical worker is supposed to work 10 hours a day for 300 days in the year, or 3,000 hours per year.

The committee on statistics and compensation insurance cost at its first meeting considered very carefully the question of a proper unit for measuring accident rates and decided to adopt the only unit then in actual use, namely, the "300-day worker."

The "300-day worker" was chosen as the standard measure for accident rates because (1) it is absolutely necessary to have a common unit for measuring accidents in all occupations, all industries, all States, and all countries; (2) the "300-day worker" had been recommended as the standard unit for computing accident rates by the Permanent International Committee on Social Insurance and the International Institute of Statistics and was in use in Germany and Austria at the time the committee on statistics took up the matter of standardization of accident statistics; (3) it was alleged that most workers did work about 10 hours a day and about 300 days in the year. It was further argued that while the "300-day worker" did conform closely to the normal worker, still he was merely an abstraction, a unit of measure, and would measure exposure to accident just as accurately for an 8-hour day as a 10-hour day, for a 200-day

year as a 300-day year. The use of this unit, it was maintained, did not suggest a 10-hour day or a 300-day year as the ideal and proper working day and industrial year.

In fact both employers and employees do regard the "300-day worker" as suggesting what the ideal working day and working year should be. The secretary of the National Safety Council has pointed out that the 8-hour day is becoming the standard working day and suggested that the unit measure be made 2,400 hours per year instead of 3,000 hours, so as more nearly to reflect the yearly working time. A 2,000-hour year was also considered by the committee on statistics and compensation insurance cost, but it was recognized by all members of the committee that any standard unit of measure which suggested the length of time men do or should work is undesirable.

In view of the fact that the working time, both the hours per day and the days per year, varies widely from plant to plant, from industry to industry, from city to city, from country to country, and from year to year, it was thought best by the committee to cut loose entirely from a unit of measure that could be misunderstood as, in any way, implying what the proper working time should be. The adoption of 1,000 hours' exposure rids us forever of any such implication and gives a unit which is convenient in size and will remain unaffected by changes in the working day or variations in the working year. The 1,000-hour exposure is a stable, scientific, mathematical unit of measure, which is what is needed for the measurement of accident rates. It has the further advantage that accident rates measured by any other unit of exposure may be readily expressed in terms of the 1,000-hour unit and vice versa. For instance, all accident rates computed in units of the "300-day worker" may be converted into rates per 1,000 hours' exposure by dividing by 3. Frequency rates are to be expressed in rates per thousand thousand (1,000,000) hours' exposure of the working force, instead of per thousand "300-day workers." Severity rates are to be expressed as days lost per thousand hours' exposure of the working force, instead of days lost per "300-day worker." In both instances the new rates can be derived from the old rates by dividing by 3.

INDUSTRIAL HYGIENE AND MEDICINE.

A Standard Method of Sickness Reporting.

IN ORDER to promote the adoption of a standard method of sickness reporting by as many establishments and sick-benefit associations as possible, two plans for recording and reporting sickness among industrial employees and sick-benefit associations have been prepared by the Public Health Service. They were formulated by a special committee on industrial morbidity statistics, Vital Statistics Section of the American Public Health Association, in cooperation with the Public Health Service and with the advice and assistance of other Government bureaus.¹ Both plans are based on the same principles, but the first is considered preferable as offering possibilities for much greater detail in personnel records. In both it is considered essential that a diagnosis of each case of sickness causing disability be recorded.

Plan A.

According to plan A an individual personnel card is kept for every employee to be considered, whether the individual becomes sick or not. For this card the following form, 4 by 6 inches in size, is suggested:

MODEL FORM FOR PERSONNEL AND SICKNESS CARD—FACE.

1. Name of Employee.		2. Check No.	3. Date This Record Begins	4. Firm No.	5. Date Employment Ended.
6. Color and Sex.	7. Year of Birth.	8. Marital Condition.		9. Speaks English?	10.
11. Departments and Occupations in Plant.					
From—	To—	Months.	Department.	Occupation.	Possible Injurious Conditions.
.....					
12. Former Occupations Outside of Plant.					
From—	To—	Months.	Occupation.	Industry.	Possible Injurious Conditions.
.....					
13. Remarks:					

¹ Sickness records for industrial establishments. Public Health Reports, Nov. 14, 1919, pp. 2593-2604. United States Public Health Service, Washington.

MODEL FORM FOR PERSONNEL AND SICKNESS CARD—REVERSE SIDE.

[illegible]

From these personnel cards monthly tabular statements can be made showing the number of workers, the number of cases of sickness occurring among them, and the sickness rate per 1,000 persons, for any group of workers. "Tabs" or "signals" in certain divisions of the top of the card are suggested, to designate sex, color, and age group. Thus, a blue signal in the left third of the top of the card might indicate "white male, under 25 years," in the middle third, "25 to 44 years," and in the right third "45 years and over." A red signal might be used for white females, a yellow one for colored males, and a green one for colored females. At the end of the month the number of workers of each sex, color, and age group in any occupation, or department, or for the plant could be recorded quickly from these tabs. A distinct signal, for any illness, attached at the time to the card and removed at the end of the month, will facilitate the keeping of the sickness record.

Reports to the Public Health Service, to plant managers, or officials of sick-benefit associations should give the information provided for in the following model form:

among a group of persons is expressed in the form of a rate, there is afforded no basis for comparison with sickness among other groups of persons, nor can the increase or decrease of sickness among any group be measured."

Study of Influenza-Pneumonia Among Wage Earners.

SIGNIFICANT facts concerning the mortality from the influenza epidemic of 1918-19 are brought out by Lee K. Frankel and Louis I. Dublin¹ in a paper read before the vital statistics section of the American Public Health Association meeting at New Orleans. The data cover the period from October 1, 1918, to June 30, 1919, and are limited to the policyholders of the industrial department of the Metropolitan Life Insurance Co., which represent over 12,000,000 people, white and colored, male and female, of all ages except early infancy and extreme old age. The group is well distributed over the United States and Canada and the results are considered to be generally applicable to the working population of the United States.

Of 105,552 policy claims paid during the period under investigation, 70,729 deaths were due to influenza-pneumonia. Slightly more than three-fourths of these deaths occurred during the months of October, November, and December, 1918, 34,471 occurring in October alone. When related to the number of years of life exposed, these deaths indicate an annual rate of 774 per 100,000 during the nine-month period. As against these ratings for the epidemic period there was a rate of 152 per 100,000 during the 12 months ending September 30, 1918. The difference between 774 and 152 per 100,000, namely, 622, is regarded as an approximate measure of the effect of the epidemic.

The chief interest in the statistics centers around the incidence of deaths in relation to sex, color, and age. The respiratory diseases under normal conditions show a higher mortality among males than females. For example, in the seven years from 1911 to 1917, the mortality rates of males showed an excess of 18 per cent over females, among white people, and of 30 per cent among colored. During the period from October, 1918, to June, 1919, however, the rates for males and females respectively were 789 and 763 among whites, and 767 for both males and females among colored people. "There is, altogether, a suggestion that the excess mortality caused by the epidemic did not

¹ Influenza mortality among wage earners and their families. By Lee K. Frankel and Louis I. Dublin. Reprinted from American Journal of Public Health, Vol. IX, No. 10, October, 1919, pp. 731-742.

operate on the sexes as the normal mortality from influenza-pneumonia had in previous years."

Normally, the incidence of respiratory diseases is much higher among colored than among white persons, the period from 1911 to 1917 showing an excess of 72 per cent of colored over white males and 56 per cent of colored over white females thus affected. It was found that during the period of the epidemic the situation was reversed, the first three months showing a rate of 1,522 per 100,000 for colored males as against 1,844 per 100,000 for white males; and of 1,504 per 100,000 for colored females against 1,723 for white females.

While during normal times influenza-pneumonia affects primarily the first age period, from one to four years, and the period of late middle and old age, the statistics of the epidemic show the highest rate among whites to be the period from 25 to 34 years, which in normal times shows the minimal rate. The authors conclude that "we are concerned in this epidemic with a disease or group of diseases which behave very differently from the way in which the disease known by the same names affected the community in previous years."

Advantages of Industrial Clinics in General Hospitals.

IN A paper read before the National Safety Council, Cleveland, Ohio, in October and reprinted in *Modern Medicine*,¹ Dr. D. L. Edsall, of the Massachusetts General Hospital, explains the advantages offered by the industrial clinic when it is operated in connection with a general hospital. He states that it is hardly to be expected that each individual industrial establishment will have in its employ a group of leading men in all the various lines of clinical and scientific medicine, and that for this reason hospitals, particularly those connected with medical schools and with the staffs that the latter have, will always need to be centers for the study and treatment of difficult cases and for the investigation of problems, however far health establishments in industrial plants may progress. He is convinced that no other method than a special clinic goes so far to insure good service to the patients and no other method so stimulates and enlightens the interest of the hospital staff in general in this important health factor. Likewise, by no other means, he declares, is it possible to group the cases together in such manner that the results of study can be analyzed and made available, and in

¹ Industrial clinics in general hospitals, by D. L. Edsall, M. D. In *Modern Medicine*, November, 1919, pp. 575-577.

no other way does there occur such an accumulation and repetition of experience as to make evident and important problems that had been unrecognized or had seemed of little significance.

To be really useful and successful several things appear to be necessary. The clinic should be in charge of a physician whose greatest interest is in the work, and he should be on sufficient salary to enable him to spend most or all of his time at the work. This is necessary in order that he may properly develop his clinic and be free to make visits to factories in order to accumulate constantly increasing knowledge of industrial processes, and in order to determine day by day whether in doubtful cases seen in the clinic the work really explains a part or the whole of the effect upon health. Much of his time will be needed also in making studies in the clinic, in factories, and in the laboratory of the problems that are frequently suggested; and in this he will have many opportunities to keep occupied voluntary or paid assistants.

Another essential element in the clinic's success will be a trained social worker who is familiar with factory conditions and industrial processes as well as with general social conditions.

Dr. Edsall believes that the primary value of such a clinic has been the better care of the patients, and that equally obvious are the opportunities offered for furnishing new knowledge and thus improving conditions through carefully planned studies and through accumulations and analyses of records.

The largest possibilities of useful development, according to Dr. Edsall, lie in the research that can be carried out "if the clinic acts as a center for coordinating the problems that are unearthed in it with the health and technical departments of the industries, on the one hand, and on the other, the men and facilities that are found in medical schools and hospitals." He suggests that "there are among these two groups and their equipment the possibilities of attacking all sorts of problems and, not infrequently, of solving them. Research developments that will control or do away with hazards are, in the opinion of the writer, in the long run far more important than the diagnosis and treatment of a group of cases, important as the latter is."

Physiologic Needs of Woman Workers in Relation to Incomes.

COMMENTING on the results of investigations by Greenwood, Hodson, and Tebb dealing with the metabolism of female munition workers, which have recently been published by the British Food (War) Committee of the Royal Society,¹ the Journal of the American Medical Association² says:

¹ Greenwood, M., Hodson, C., and Tebb, A. E.: Report on the metabolism of female munition workers, Proc. Roy. Soc., section B, 91: 62 (Aug. 6), 1919.

² Journal of the American Medical Association, Nov. 15, 1919, p. 1533.

The war has for the first time made considerable demands on women to expend their energies in toil of an exacting sort. Hence the need of including them in the newer calculations of food requirement in relation to industry. * * * Grouping the operations of these persons (female munition workers) in the sequence of severity of the labor involved, it is concluded that light turning and forging need about 100 calories per square meter per hour. The data for other operations are as follows: For tool setting, heavy turning, stamping, finishing, and shell hoisting, 125 calories; for gauging, walking, and carrying, 160 calories; for more arduous labor, 180 calories. Translating these findings into food fuel requirements for the entire day, after allowance is made for culinary and alimentary waste, etc., the needs amount to 2,800, 3,100, 3,500, and 3,800 calories, respectively, per day. The figures cited show that the energy requirement of the lightest class of workers may be only about three-quarters that of the heaviest. Nevertheless, the remuneration of the kind of work conducted by the latter is often much less than that of several operations calling for many fewer calories. Even after making allowance for one and a half nonworking days, the weekly calory requirement of the two most unlike groups ranges from 17,000 at one extreme to 21,500 at the other. Any scheme of remuneration that aims to make returns adequate to keep the cost of food at a reasonably low proportion of the total income must take into account the decidedly greater food needs of those who often represent the least well-recompensed group. Thus, a food allowance of \$10 a week which just suffices for the less active worker must be augmented to \$13 in case the greater effort is expended. As the English experts now remind us, in any scientific appraisal of the income needed to maintain an accepted standard of living, it is essential to determine the minimal expenditure necessitated by the occupation of the wage earner. Variations in the physiologic demand translated into terms of money may nowadays be not inconsiderable.

The Use of Psychiatry in Industrial Medicine.

NEUROPSYCHIATRY proved itself of undisputed value in the medical history of the war. Its application to industrial medicine now appears to be accepted as a logical consequence, and references to the training and work of the industrial psychiatrist, the psychiatric nurse, and social worker are common, although their meaning is still somewhat cryptic so far as the average reader is concerned. It is, therefore, of special interest to see outlined clearly a probable field for the activities of the psychiatrist in industrial medicine and a goal toward which his work may be hopefully directed during the near future. A lucid statement as to what seems to be a reasonable application of psychiatry to industrial hygiene under the present limited understanding of this branch of medicine, combined with the limitations imposed upon its practice by industrial conditions, is presented by Dr. Stanley Cobb, neuropsychiatrist in industrial hygiene of the Harvard Medical School, in the *Journal of Industrial Hygiene*.¹

¹ Applications of psychiatry to industrial hygiene, by Stanley Cobb. *Journal of Industrial Hygiene*, November, 1919, pp. 343-347.

Dr. Cobb believes that much of the chaos in industry to-day is due to the unhealthy mental condition of the workers, and that this unhealthy condition is only the natural consequence of long endurance of an environment which ignores the fundamental needs of human nature and thus represses normal emotional and mental expression. He considers it no exaggeration to agree with Carleton Parker in saying that "Modern labor unrest has a basis more psychopathological than psychological, and it seems accurate to describe modern industrialism as mentally insanitary."

Stated in nontechnical language, the practical usefulness of industrial psychiatry lies in the study of the individual worker and his environment. The author thinks that a hopeful aspect of the present situation is the fact that the technical literature in the fields of political economy, education, industrial management, psychology, medicine, and social service shows "a feeling of broad humanitarianism, a desire to understand each member of the industrial system as an individual, and a reaction against the old system of exploiting labor to produce wealth."

He believes that the careless methods of reasoning regarding human nature which are a part of the orthodox tests must be exchanged for intelligent analysis of human motives, and that by so doing various phenomena such as business confidence, the release of work energy, the decay of workmanship, decline in the thrift habit, and labor unrest may be properly interpreted. He quotes Parker to the effect that the workman has about "16 instinct unit characters" which require satisfaction in the same degree as is usually provided for the college student. The same author in discussing the I. W. W. states that in the thwarting of these instincts and the limiting of the opportunities of the worker to obtain the happiness, personal development, and aid when sick that he needs, a state of mind amounting to an industrial psychosis is induced and that the I. W. W. are merely symptoms showing the neglect in these respects of industrial workers in this country. These "mentally insanitary" conditions may be corrected not only by shorter hours and increased pay but by the education of children so that they may learn how to use their leisure time properly.

Dr. Cobb believes that economists are outdistancing physicians in abandoning cut and dried methods and ideas, and that in developing mental hygiene in industry the physician must forget orthodox psychiatry and substitute an individual psychology which will take into consideration the reaction of individuals to their environment.

A hypothetical case is cited of what is commonly known as "nervous breakdown" in a department store employee, which might

have been prevented by a half-hour interview of an intelligent psychiatrist, leading to a little material assistance and a simple readjustment of the woman's personal problem. Such cases, variously called "neurasthenia," "psychasthenia," and "psychoneurosis" are common in wards and dispensaries, it is stated, where the doctors do little for them, the need being for an investigation and readjustment of the patients' personal problems. These conditions and need for this kind of treatment are found not only among people positively ill but among the restless, inefficient, and the radical elements of society. "Peabody and his collaborators found an interesting example of this in the cases of Effort Syndrome studied at U. S. A. General Hospital No. 9. A striking number of the histories showed that in civil life these men drifted from one employment to another, never breaking down enough to consult a physician, but adding their number to the shifting, inefficient labor element so costly to employers. It took the rigor of army life, with no possibility of escape by moving on, to bring out their symptoms. Before these people have left their work or have been fired for inefficiency, they should be interviewed by some one competent to understand them and their probable troubles. At such times advice from a physician, the loan of some money, a visit to a sick child or wife, or any of the thousand possible personal and individual aids, might save the worker from becoming soured, keep him from joining the ranks of the discontented, and prevent the development of a litigant and paranoid personality. * * *

When the instincts for self-assertion, creation, and excitement are suppressed through the workings of the present industrial system the result is an abnormal frame of mind which is evidenced in striking, drinking, etc., unless some outlet for the workers' energies is provided. This whole field is so large, however, that Dr. Cobb believes the average industrial physician will be satisfied to watch for and treat sympathetically the psychotic symptoms as they appear in individuals.

In regard to the claims made as to the value of mental tests of applicants for industrial positions, he believes that they are of use from the point of view mainly of determining subnormal individuals, although they are of service in reducing misfits in shops—a condition conducive to mental breakdowns.

While mental fatigue has received much attention from psychiatrists, Dr. Cobb thinks that overwork is not the fundamental cause of neuroses or psychoneuroses but that these are fundamentally emotional breakdowns. Although the symptoms are similar to those of neuromuscular fatigue, this is cured by simple rest, which is not the case in the nervous diseases under discussion.

The mechanism of such a neurosis is typically something like this: An individual is in an intolerable situation which he is constitutionally unable to dominate; the reaction of a neurosis sets in with depression of spirits, irritability, preoccupation, self-pity, etc., but a conventional cause for the decreased efficiency must be found to rationalize the situation, so the individual calls it overwork. Obviously with this idea of overwork in mind the symptom usually acquired is fatigue or asthenia, but frequently symptoms more closely associated with the work are developed, such as paralysis of parts of the body necessary for work, muscular pains making work impossible, tremors, or even epileptiform seizures. * * * Work may of course be an etiological factor, but not through so simple a mechanism as accumulated fatigue. Work that represses emotional cravings often brings out neuroses, just as satisfactory work is the greatest curative agent we have for these conditions. Let us no longer fool ourselves into thinking that overwork, per se, is the cause of mental breakdown.

The problems of industrial psychiatry, therefore, summed up briefly are: Prevention of mental breakdowns by giving the worker the proper environment and removing causes of discontent, and treating such cases from an individual standpoint, as well as considering as psychiatric cases those persons who until recently have been given such unsympathetic names as "the groucher," "the kicker," "the trouble maker," and "the hobo."

A reasonable application of psychiatry to industry under present conditions would seem to be as follows:

1. Physical examination of all applicants for work.
2. Mental examination by (a) a period of training and observation, or (b) through mental tests.
3. Keeping in personal touch with employees by means of (a) good foremen, (b) a system for watching individual efficiency, or (c) a sympathetic staff with a psychiatric point of view in the employment management office, thus salvaging the men who might otherwise be fired.
4. Training the industrial physician to a knowledge of how human nature is constituted, not in conventional terms, but in the light of a dynamic and living psychology that considers the behavior of human beings in terms of instinctive sources of energy, integrated into motives, these motives needing outlet through energy transformation into satisfactory activity.

WORKMEN'S COMPENSATION.

Comparison of Compensation Laws in the United States, Including 1919 Legislation.¹

By CARL HOOKSTADT.

IN 1917 the Bureau of Labor Statistics made a comparison of the principal features of the workmen's compensation laws of the several States and Territories. This was published as Bulletin 240. Since then 33 jurisdictions have amended their compensation laws, while 5 new States² have been added to the list of those having such laws.

At present 42 States, the 3 Territories of Alaska, Hawaii, and Porto Rico, and the Federal Government have workmen's compensation laws upon their statute books.³ These laws range widely as regards both coverage and amount of benefits provided. In some of the States the scale of benefits is so low and the scope so limited that the compensation act is practically no improvement over the former employers' liability system.

Especially is this true of the recent Alabama act, which exempts all employers having less than 16 employees; provides no administrative commission; does not require employers to insure; and, the greatest weakness of all, permits settlements for less than the statutory amount of benefits. Furthermore, settlements between the employer and employee are final and not subject to review, except that cases in which periodical payments continue for more than six months may be modified on the ground of increase or decrease of incapacity due solely to the injury.

In attempting a comprehensible comparison of the various acts it is necessary to concentrate upon the more important features. The scope of an act—in other words, what industries are covered, what persons are compensated, and what exemptions are made—is perhaps of foremost importance. The amount of compensation received is probably the next important feature of a compensation law. This includes the compensation scale, the length of time for which compensation is paid, the maximum and minimum limits, the amount of

¹ The present article is a summary of a forthcoming bulletin.

² Alabama, Missouri, North Dakota, Tennessee, and Virginia.

³ North Carolina, South Carolina, Georgia, Florida, Mississippi, Arkansas, and the District of Columbia are the only jurisdictions still without such laws.

medical service provided, and the length of the waiting period. Other important features are the administrative system, provisions as to insurance, and type of injuries covered.

Compensation Systems.

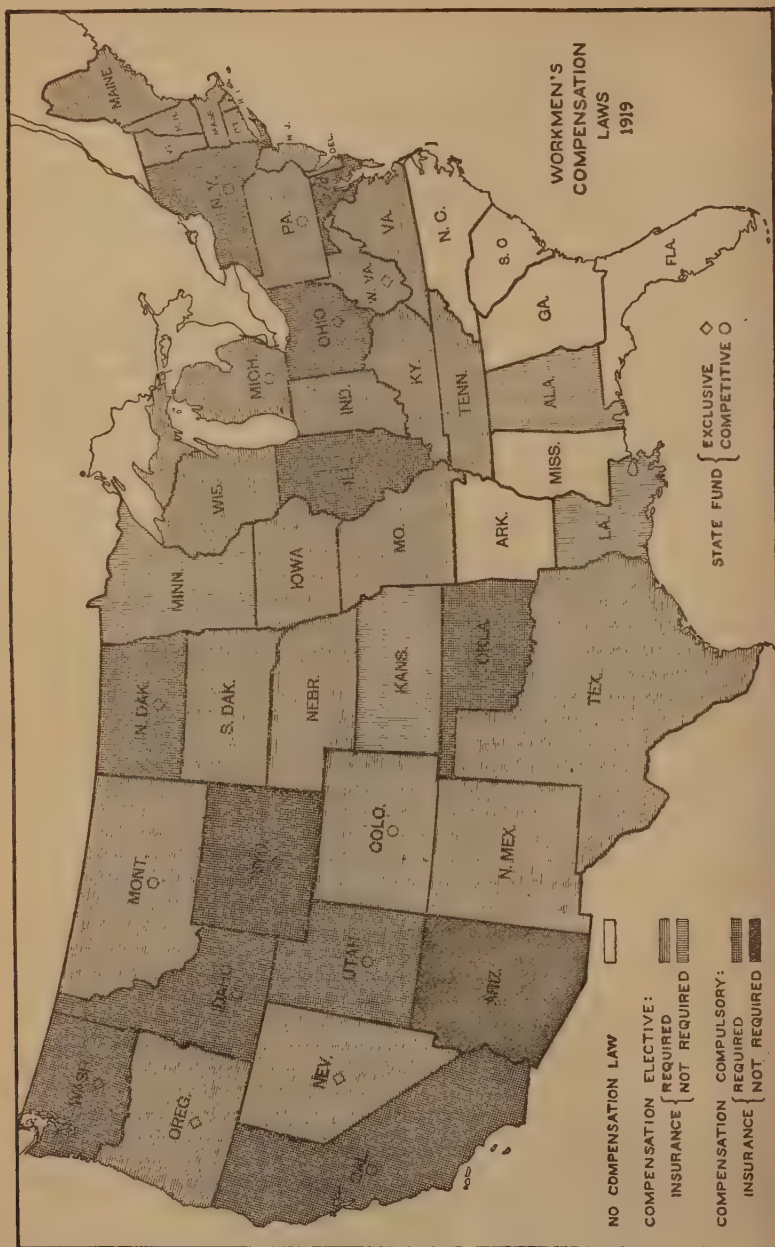
Compensation laws may be either compulsory or elective. A compulsory law is one which requires every employer within the scope of the compensation law to accept the act and pay the compensation specified. There is no choice. An elective law is one in which the employer has the option either of accepting or of rejecting the act, but, in case he rejects, the customary common-law defenses are abrogated. The requirements as to insurance constitute another basis of classification. On this basis the laws may be classified as compulsory, including all laws in which some form of insurance is required, or optional, including laws in which no insurance is required. The following table shows the compensation States grouped according to these two classifications:

COMPENSATION STATES CLASSIFIED ACCORDING TO WHETHER LAW IS COMPULSORY OR ELECTIVE.

Compensation compulsory (13).		Compensation elective (32).	
Insurance required (12).	Insurance not required (1).	Insurance required (27).	Insurance not required (5).
California. Hawaii. Idaho. Illinois. Maryland. New York. North Dakota. Ohio. Oklahoma. Utah. Washington. Wyoming.	Arizona.	Colorado. Connecticut. Delaware. Indiana. Iowa. Kentucky. Maine. Massachusetts. Michigan. Missouri. Montana. Nebraska. Nevada. New Hampshire. New Jersey. New Mexico. Oregon. Pennsylvania. Porto Rico. Rhode Island. South Dakota. Tennessee. Texas. Vermont. Virginia. West Virginia. Wisconsin.	Alabama. Alaska. Kansas. Louisiana. Minnesota.

It will be noted that of the 45 compensation States¹ 13 are compulsory and 32 are elective as to compensation provisions, while 39 are compulsory and 6 elective as to insurance requirements.

¹ For the sake of simplicity all jurisdictions are referred to as States.



Very considerable differences appear in the methods provided by the laws of the 39 States in which insurance is obligatory. Thus the State may make provision for the carrying of such insurance, and require all employers coming under the act to avail themselves of such provision; or the State fund may simply offer one of alternative methods. Again, the State may refrain entirely from such action, but require insurance in private companies, stock or mutual; and lastly, self-insurance may be permitted, i. e., the carrying of the risk by the individual, subject to such safeguards as the law may prescribe.

The following table shows the groupings on the bases indicated:

COMPULSORY INSURANCE STATES, CLASSIFIED AS TO DIFFERENT KINDS OF INSURANCE ALLOWED.

State fund (17).		Private insurance (31).	Self-insurance (31).
Exclusive (8).	Competitive (9).		
	California.....	California.....	California.
	Colorado.....	Colorado.....	Colorado.
		Connecticut.....	Connecticut.
		Delaware.....	Delaware.
		Hawaii.....	Hawaii.
	Idaho ¹	Idaho ¹	Idaho.
		Illinois.....	Illinois.
		Indiana.....	Indiana.
		Iowa.....	Iowa.
		Kentucky.....	Kentucky.
		Maine.....	Maine.
	Maryland.....	Maryland.....	Maryland.
		Massachusetts.....	
	Michigan.....	Michigan.....	Michigan.
		Missouri.....	Missouri.
	Montana.....	Montana.....	Montana.
		Nebraska.....	Nebraska.
Nevada.....			
		New Hampshire ²	New Hampshire. ³
		New Jersey.....	New Jersey.
		New Mexico.....	New Mexico.
	New York.....	New York.....	New York.
North Dakota.....			
Ohio ³			Ohio. ³
		Oklahoma.....	Oklahoma.
Oregon.....			
	Pennsylvania.....	Pennsylvania.....	Pennsylvania.
Porto Rico.....			
		Rhode Island.....	Rhode Island.
		South Dakota.....	South Dakota.
		Tennessee.....	Tennessee.
		Texas.....	
	Utah.....	Utah.....	Utah.
		Vermont.....	Vermont.
		Virginia ⁴	Virginia. ⁴
Washington.....			
West Virginia ⁵			West Virginia. ⁵
		Wisconsin.....	Wisconsin.
Wyoming.....			

¹ Idaho permits self-insurance. Employers who carry their own risk may insure in authorized guaranty companies.

² The New Hampshire law requires employers accepting the act to furnish proof of solvency or give bond, but makes no other provision for insurance.

³ Ohio permits self-insurance, but all employers are required to contribute their proportionate share to the State Insurance fund surplus.

⁴ Self-insurers required to contribute 4 per cent of their premiums to commission's maintenance fund.

⁵ West Virginia has practically an exclusive State insurance system. Self-insurance is allowed, but employers desiring to carry their own risk must contribute their proportionate share to the administrative expenses of the law.

Broadly speaking, the laws may be divided into four main groups or combination of groups, namely: (1) Exclusive State fund, (2) competitive State fund, (3) private insurance, either stock or mutual, and (4) self-insurance or where employers are permitted to carry their own risk. In most cases the employers have the option of several kinds of insurance. This does not hold true, however, of the States having strictly exclusive systems. In these cases no other form of insurance is permitted.

It will be noted that six States have such exclusive systems. In three of these, Nevada, Oregon, and Porto Rico, compensation is elective and insurance is therefore not absolutely compulsory, since employers need not accept the act, but should they accept, insurance in the State fund is compulsory. In North Dakota, Washington, and Wyoming both compensation and insurance are compulsory. In these six States the State becomes the sole insurance carrier. It classifies the industries into groups according to hazard, fixes and collects premiums, adjudicates claims and pays compensation. Two other States (Ohio and West Virginia) are nearly exclusive in character. They allow no private casualty company to operate, but permit self-insurance. Ohio permits employers to carry their own risk, though all such employers are required to contribute their proportionate share to the State insurance fund surplus. Self-insurers, however, are not permitted to insure their risk in private companies. West Virginia has practically an exclusive State insurance system. It permits no private insurance, but does allow self-insurance. The employers, however, who desire to carry their own risk must contribute their proportionate share to the administrative expenses of the law.

In the other 31 States having compulsory insurance laws some form of competition exists, or at least the employer is given an option as to the method of insuring his risk. In nine of these States¹ the laws provide for a State fund through which the State conducts a workmen's compensation insurance business in competition with private liability companies. Private casualty companies, however, are permitted to write compensation insurance in all of these States. Idaho differs somewhat from the other States having competitive State funds. It allows employers to carry their own risk and also permits substitute insurance schemes if the benefits provided equal those of the act. Self-insurers, however, as evidence of satisfactory security, may furnish a surety bond or guaranty contract with any authorized surety or guaranty company. Moreover, the attorney general has

¹ California, Colorado, Idaho, Maryland, Michigan, Montana, New York, Pennsylvania, and Utah.

held that the words "guaranty contract" includes insurance contracts.

Of the 39 compulsory insurance States, 31 permit private companies to operate, the only exceptions being the 6 exclusive States of Nevada, North Dakota, Oregon, Porto Rico, Washington, and Wyoming, and the States of West Virginia and Ohio.

Thirty-one States allow employers to self-insure or carry their own risk, the exceptions again being the exclusive States and Massachusetts and Texas. Employers who avail themselves of this privilege are required either to give proof of their financial solvency and ability to pay compensation or to furnish bonds or other security, or to do both. In several States such employers are also permitted to secure their compensation payments by guaranty insurance.

New Hampshire's compensation law is exceptional in that employers who accept the act must furnish proof of financial solvency or deposit adequate security, but the law makes no other provision as to insurance.

Scope or Coverage.

No State compensation act, even when full use of the elective provisions is taken into account, covers all employees. The nearest approach to universal coverage is the New Jersey act, which includes all employees, except casual laborers, public officials, and public employees receiving salaries in excess of \$1,200. The principal exemptions, in the order of their importance, perhaps, are: Nonhazardous employments; agriculture; domestic service; numerical exemptions, i. e., excepting employers having less than a specified number of employees; public employees; casual laborers or those not employed for the purpose of the employer's business; and employments not conducted for gain.

Hazardous Employments.

The following 13 States include only hazardous employments: Alaska, Arizona, Illinois, Kansas, Louisiana, Maryland, Montana, New Hampshire, New Mexico, Oklahoma, Oregon, Washington, and Wyoming. In these States the industries covered are enumerated in the act. In Alaska only mining operations are included, but, in the other States, the principal hazardous employments are covered, including manufacturing, mining, transportation, and construction work.

Numerical Exemptions.

Twenty-two States exempt employers having less than a stipulated number of employees from the operation of the act, as shown in the following table:

NUMERICAL EXEMPTION STATES CLASSIFIED ACCORDING TO NUMBER OF EMPLOYEES EXEMPTED.

Employers having less than—

3 employees (6).	4 employees (3).	5 employees (7).	6 employees (2).	10 employees (1).	11 employees (2).	16 employees (1).
Kentucky. Oklahoma. Porto Rico. Texas. Utah. Wisconsin.	Colorado. New Mexico. New York.	Alaska. Connecticut. Delaware. Kansas. New Hampshire. Ohio. Missouri.	Maine. Rhode Island.	Tennessee.	Vermont. Virginia.	Alabama.

Agriculture and Domestic Service.

Hawaii and New Jersey are the only States which include agriculture and New Jersey the only State which includes domestic service. In all other States these employments are excluded.

Public Employees.

The following 26 States include all public employees, including both State and municipal: California, Colorado, Connecticut, Hawaii, Idaho, Illinois, Indiana, Louisiana, Maine, Michigan, Montana, Missouri, Nebraska, Nevada, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Utah, Virginia, West Virginia, and Wisconsin.

In the following 12 States the inclusion of public employees is only partial: Alabama, Louisiana, Kansas, Kentucky, Maryland, Massachusetts, Minnesota, Oklahoma, Porto Rico, Vermont, Washington, and Wisconsin.

In the following 7 States public employees are exempted: Alaska, Arizona, Delaware, New Hampshire, New Mexico, Tennessee, and Texas.

In addition to the foregoing exclusions, many States have special exemptions of more or less importance, the most frequent being the exclusions of highly paid employees, outworkers, and clerical occupations. Maine also excludes logging and Tennessee excludes coal mining.

Per Cent of Employees Covered.

The foregoing exclusions have to do only with the statutory scope of the compensation laws. But what do these various inclusions and exclusions really mean when applied in each State? How many employees are actually excluded through the nonhazardous, or numerical, or agricultural, or domestic service exemptions? Then again, how does the same statutory exclusion affect different States?

The exemption of agriculture in Rhode Island, for instance, is of little importance as compared to a similar exemption in Texas.

In the following table an attempt has been made to compute the percentage of employees covered by the compensation acts of the various States. The computations, though based upon a detailed analysis of the Federal occupation census figures, are in some cases merely estimates, and no claim is laid to such accuracy as the percentages would suggest. The aim has been, however, to maintain uniformity of treatment as between States, so that while the percentage of error for a given State may be considerable, the percentages given would show the relative status of each State with a reasonable degree of accuracy. The States are arranged in descending order of percentage of employees covered. All employees in employments covered by the compensation law are included irrespective of whether or not the employers in the elective States have accepted the act.

COMPENSATION STATES ARRANGED IN DESCENDING ORDER OF PERCENTAGE OF EMPLOYEES COVERED.

State.	Per cent of employees covered.	State.	Per cent of employees covered.
New Jersey.....	99.8	South Dakota.....	58.0
Hawaii.....	92.6	New Hampshire.....	56.0
Pennsylvania.....	88.8	Illinois.....	55.4
Massachusetts.....	87.8	Vermont.....	55.2
Michigan.....	83.1	Arizona.....	52.4
Rhode Island.....	82.9	Washington.....	51.5
Connecticut.....	81.9	Montana.....	50.9
New York.....	80.1	Oregon.....	48.7
West Virginia.....	80.1	Texas.....	47.9
Indiana.....	79.4	North Dakota.....	46.8
Minnesota.....	79.0	Wyoming.....	46.3
Ohio.....	76.3	Maryland.....	45.9
Nevada.....	76.2	Virginia.....	45.6
California.....	76.2	Tennessee.....	37.2
Wisconsin.....	75.4	Kansas.....	36.9
Utah.....	74.4	Oklahoma.....	35.9
Maine.....	72.9	Louisiana.....	35.2
Nebraska.....	70.4	Alabama.....	33.6
Idaho.....	68.7	Alaska.....	31.2
Missouri.....	66.1	New Mexico.....	30.7
Colorado.....	63.1	Porto Rico.....	20.5
Delaware.....	62.9		
Iowa.....	62.7		
Kentucky.....	60.2		

Waiting Period.

In most of the States, an injury to be compensable must cause disability for a certain length of time, no compensation being paid during this time. This noncompensable preliminary period is known as the "waiting period." In two States (Oregon and Porto Rico) there is no such waiting time, compensation being paid for all injuries producing any disability. The most common provision is that

disability must continue for more than one week, this being found in 22 States. Utah and the Federal Government require a waiting period of 3 days, 7 States of 10 days, and 13 of 2 weeks. In 21 States the waiting period is abolished entirely if the disability continues longer than certain specified periods.

The following table classifies the States according to length of waiting period:

COMPENSATION STATES, CLASSIFIED BY LENGTH OF WAITING PERIOD.

No waiting period (2).	3 days (2).	1 week (22).	10 days (7).	2 weeks (13).
Oregon. Porto Rico.	Utah. United States.	California. Connecticut (none if disabled over 4 weeks). Hawaii (none if partially disabled). Idaho. Illinois (none if disabled 4 weeks). Indiana. Kansas. Kentucky. Louisiana (none if disabled 6 weeks). Michigan (none if disabled 6 weeks). Minnesota. Missouri (none if disabled over 6 weeks). Nebraska (none if disabled 6 weeks). Nevada (none if disabled 2 weeks). North Dakota (none if disabled over 1 week). Ohio. Oklahoma (none if disabled 3 weeks). Texas. Vermont. Washington (none if disabled over 30 days). West Virginia. Wisconsin (none if disabled over 4 weeks).	Colorado. Maine. Massachusetts. New Jersey. Pennsylvania. South Dakota (none if disabled 6 weeks). Wyoming (none if disabled over 30 days).	Alabama (none if disabled 4 weeks). Alaska (none if disabled 8 weeks). Arizona (none if disabled over 2 weeks). Delaware (none if disabled 4 weeks). Iowa. Maryland (1 week if totally and permanently disabled). Montana. New Hampshire. New Mexico. New York (none if disabled over 7 weeks). Rhode Island (none if disabled over 4 weeks). Tennessee (none if disabled 6 weeks). Virginia.

Compensation Scale.

The actual amount of benefits received by injured workers is dependent upon the percentage scale, the weekly maximum, the periods for which compensation is paid, and the maximum amount payable in any individual case. The following table shows the maximum period and maximum amount of compensation for each State in case of death, permanent total disability, and partial disability:

MAXIMUM PERIODS AND MAXIMUM AMOUNT OF COMPENSATION PAYABLE IN CASE
OF DEATH, PERMANENT TOTAL DISABILITY, AND PARTIAL DISABILITY.

States.	Death.		Permanent total disability.		Partial disability.	
	Weeks.	Amount.	Weeks.	Amount.	Weeks.	Amount.
Alabama.....	300	\$5,000	550	\$5,000	300	
Alaska.....		6,000		6,000		\$4,800
Arizona.....	400	4,000	Life.	4,000	During disability.	4,000
California.....	240	5,000	Life.		240	3 years' earnings.
Colorado.....	312	3,125	Life.		During disability.	2,600
Connecticut.....	312		520		520	
Delaware.....	285		475	4,000	285	
Hawaii.....	312	5,000	312	5,000	312	5,000
Idaho.....	400		Life.		150	
Illinois.....	416	4,000	Life.		416	
Indiana.....	300	5,000	500	5,000	300	
Iowa.....	300		400		225	
Kansas.....	250	3,800	416		416	
Kentucky.....	335	4,000	416	5,000	335	4,000
Louisiana.....	300		400		300	
Maine.....	300	3,500	500	4,200	300	
Maryland.....	416	4,250	Life.	5,000		3,500
Massachusetts.....	500	4,000	500	4,000	During disability.	4,000
Michigan.....	300		500	6,000	500	
Minnesota.....	300		550		300	
Missouri.....	300		Life.		400	
Montana.....	400		Life.		150	
Nebraska.....	350		Life.		300	
Nevada.....	Death or remarriage.		Life.		433	
New Hampshire.....	300	3,000	300		300	
New Jersey.....	300		400		300	
New Mexico.....	300		520			
New York.....	Death or remarriage.		Life.		During disability.	3,500
North Dakota.....	Death or remarriage.		Life.		During disability.	
Ohio.....	416	5,000	Life.		During disability.	3,750
Oklahoma.....	Not covered.		500		300	
Oregon.....	Death or remarriage.		Life.		104	
Pennsylvania.....	300		500	5,000	300	
Porto Rico.....		4,000		4,000		2,500
Rhode Island.....	300		500	5,000	300	
South Dakota.....	378	3,000	Life.	3,000	312	
Tennessee.....	400		550	5,000	300	
Texas.....	360		401		300	
Utah.....	312	5,000	Life.		312	5,000
Vermont.....	260	3,500	260	4,000	260	
Virginia.....	300	4,000	500	5,000	300	
Washington.....	Death or remarriage.		Life.			2,000
West Virginia.....	Death or remarriage.		Life.		340	
Wisconsin.....	320	4,500	780		During disability.	4,500
Wyoming.....		3,000		5,500		1,500
United States.....	Death or remarriage.		Life.		During disability.	

Per Cent of Wages.

In all but three States (Oregon, Washington, and Wyoming) the amount of compensation is based upon wages. A number of States, however, provide fixed lump sums for certain injuries, but apply the percentage system to all others. In most of the States the prescribed percentage remains uniform for all injuries. A few States have varying percentages for different types of injuries, and in several States the percentage varies with conjugal condition and number of children.

In 18 States¹ the amount of compensation is 50 per cent of the employee's wages; in 4 States,² 55 per cent; in 9 States,³ 60 per cent; in 3 States,⁴ 65 per cent; and in 8 States⁵ and the Federal Government, 66⅔ per cent.

Weekly Maximum and Minimum.

The compensation benefits based upon percentage of wages are usually modified by weekly maximum and minimum limits which may materially affect the amounts, though to what extent depends, of course, upon the wage level. Two States (Alaska and Wyoming) have no maximum or minimum provisions; 5 States,⁶ have a weekly maximum of \$10 or under; 1⁷ has a maximum of \$11; 11⁸ have a maximum of \$12; 7,⁹ of over \$12 and under \$15; 8,¹⁰ of \$15; 6 States¹¹ and the Federal Government have a maximum of over \$15 to \$18; 2 States¹² have a maximum of \$20 or over; while 3 States¹³ provide monthly pensions of fixed amounts.

Death.

The benefits for death in most cases approximate three or four years' earnings of the deceased employee. The methods provided for determining compensation for death vary somewhat. Two States¹⁴ provide for fixed absolute amounts without reference to wages or length of time, and one State¹⁵ proportions the amount of compensa-

¹ Alabama (increased to 60 per cent in certain cases), Alaska, Arizona, Colorado, Connecticut, Delaware, Illinois (increased to 65 per cent in certain cases), Maryland, Montana, New Hampshire, New Mexico, Oklahoma, Porto Rico, Rhode Island, Tennessee, Vermont, Virginia, and West Virginia.

² Idaho, Indiana, Louisiana, and South Dakota.

³ Hawaii (total disability only; partial, 50 per cent; death, 25 to 60 per cent), Iowa, Kansas (specified injuries, 50 per cent), Maine, Michigan, Nevada (total disability only; partial, 50 per cent; death, 15 to 66⅔ per cent), Pennsylvania, Texas, and Utah.

⁴ California, Kentucky, and Wisconsin.

⁵ Massachusetts, Minnesota, Missouri, Nebraska, New Jersey (death, 35 to 60 per cent), New York, North Dakota, and Ohio.

⁶ Colorado, Louisiana, New Hampshire, and Virginia, \$10; Porto Rico, \$7.

⁷ Tennessee.

⁸ Alabama (increased to \$15 in certain cases), Idaho, Illinois (increased to \$15 in certain cases), Kentucky, Maryland, New Jersey, New Mexico, Ohio (death and permanent total disability, \$15), Pennsylvania, South Dakota, and West Virginia.

⁹ Montana and Vermont, \$12.50; Indiana, \$13.20; Connecticut, death and partial disability, \$18, other disabilities, \$14; Michigan, \$14; Rhode Island, total disability, \$14, other disabilities, \$10; Wisconsin, \$14.63.

¹⁰ Delaware, Iowa, Kansas, Maine, Minnesota, Missouri, Nebraska, and Texas.

¹¹ Utah, \$16; Hawaii and Oklahoma, \$18; Massachusetts, death and specified injuries, \$10, other disabilities, \$16; Nevada, \$9.23 to \$16.62; New York, \$15 to \$20; Federal Government, \$15.38.

¹² California, \$20.83; North Dakota, \$20.

¹³ Oregon, Washington, and Wyoming.

¹⁴ Alaska and Wyoming.

¹⁵ Porto Rico.

tion to the earning capacity and number and needs of dependents of deceased. Six States¹ provide for annual earnings for three or four years. The large majority of States, however, apply a wage percentage for specified periods. Of these, 2 States² pay death benefits for less than 300 weeks; 13³ for 300 weeks; 7⁴ for over 300 but under 400 weeks; 7⁵ for 400 to 500 weeks; while 6 States⁶ and the Federal Government provide benefits until the death or remarriage of the widow. Twenty-two States also place a limit upon the maximum amount payable in any one case. These maximum amounts range from \$3,000 in New Hampshire, South Dakota, and Wyoming to \$6,000 in Alaska. The Oklahoma law does not cover fatal accidents.

Permanent Total Disability.

Most States recognize the fact that a permanently disabled workman is a greater economic loss to his family than if he were killed outright at the time of the accident, and, consequently, provide greater benefits than in case of fatal accidents. Eighteen States⁷ and the Federal Government provide that for permanent total disability compensation payments shall continue for the full period of the injured workman's life. Three States⁸ pay benefits for 312 weeks or less; 7 States⁹ for 400 but under 500 weeks, 13 States¹⁰ for 500 to 550 weeks; and one State¹¹ for 9 to 15 years. Alaska and Wyoming provide fixed absolute amounts, while Porto Rico proportions the amount of compensation to the wage and age of the injured workman. Nineteen States also place a limit upon the maximum amount payable in any one case. These maximum amounts range from \$3,000 in South Dakota to \$6,000 in Alaska and Michigan.

¹ California, Kansas, New Hampshire, 3 years; Illinois, South Dakota, and Wisconsin, four years.

² Vermont, 260 weeks; Delaware, 285 weeks.

³ Alabama, Indiana, Iowa, Louisiana, Maine, Michigan, Minnesota, Missouri, New Jersey, New Mexico, Pennsylvania, Rhode Island, and Virginia.

⁴ Colorado, Connecticut, Hawaii, and Utah, 312 weeks; Kentucky, 335 weeks; Nebraska, 350 weeks; Texas, 360 weeks.

⁵ Arizona, Idaho, Montana, and Tennessee, 400 weeks; Maryland and Ohio, 416 weeks; Massachusetts, 500 weeks.

⁶ Nevada, New York, North Dakota, Oregon, Washington, and West Virginia.

⁷ Arizona, California, Colorado, Idaho, Illinois, Maryland, Missouri, Montana, Nebraska, Nevada, New York, North Dakota, Ohio, Oregon, South Dakota, Utah, Washington, and West Virginia.

⁸ Vermont, 260 weeks; New Hampshire, 300 weeks; Hawaii, 312 weeks.

⁹ Iowa, Louisiana, New Jersey, and Texas, 400 weeks; Kansas and Kentucky, 410 weeks; Delaware, 475 weeks.

¹⁰ Indiana, Maine, Massachusetts, Michigan, Oklahoma, Pennsylvania, Rhode Island, and Virginia, 500 weeks; Connecticut and New Mexico, 520 weeks; Alabama, Minnesota, and Tennessee, 550 weeks.

¹¹ Wisconsin.

Partial Disability.

Two methods for compensating partial disabilities are generally provided for. One method is based upon the percentage of wage loss occasioned by such disability, payments continuing during incapacity but subject to maximum limits. The second method is the adoption of a specific schedule of injuries for which benefits are awarded for fixed periods, the payments being based upon a percentage of wages earned at the time of the injury. Usually both methods of payment are provided for. The practice in most States is to pay a percentage of the wage for fixed periods for certain enumerated injuries and for all other injuries a percentage of the wage loss during disability. The number of injuries specified in the schedule varies in the different States, but provision is generally made for the loss of arm, hand, leg, foot, eye, fingers, and toes, and parts thereof.

In 36 States the schedules for enumerated partial disabilities are stated in terms of weeks. In 23 of these States¹ the amounts provided are in lieu of all other compensation benefits except medical service; in 10 States² and the Federal Government compensation is also paid for temporary total disability during the healing period in addition to the schedule amounts; in Massachusetts and Rhode Island, compensation is paid for total disability during the healing period and for partial disability thereafter, in addition to the schedule amounts; while Maine provides for continuing partial disability payments in addition to those provided by the schedule but not over 300 weeks in all. These facts should be borne in mind, therefore, in considering the following comparative table:

¹ Alabama, Colorado, Delaware, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Montana, Nebraska, New Mexico, New York, Oklahoma, Pennsylvania, Tennessee, Texas, Virginia, and Wisconsin.

² Connecticut, Illinois, Missouri, Nevada, New Jersey, Ohio, Oregon, South Dakota, Utah, and Vermont.

NUMBER OF WEEKS FOR WHICH COMPENSATION IS PAYABLE FOR SPECIFIED INJURIES IN THE SEVERAL STATES.

State.	Loss of—													
	Arm (at shoulder).	Hand.	Thumb.	Index finger.	Middle finger.	Ring finger.	Little finger.	Leg (at hip)	Foot.	Great toe.	Other toe.	Sight of one eye.	Hear- ing, one ear.	Hear- ing, both ears.
Ala. ¹	200	150	60	35	30	20	15	175	125	30	10	100	.....	150
Cal. ¹	203	104	35	18	13	7	9	203	104	18	4	104	35	133
Conn. ²	203	155	33	38	30	25	20	182	130	38	13	104	52	155
Del. ¹	194	153	.....	.....	.....	.....	.....	194	135	.....	.....	113	.....	.....
Hawaii ¹	312	244	60	46	30	25	15	288	205	33	16	128	60	312
Idaho ¹	200	150	30	20	15	12	9	180	125	15	6	100	.....	.....
Ill. ²	200	150	60	35	30	20	15	175	125	30	10	100	.....	.....
Ind. ¹	250	200	60	40	35	30	30	200	150	60	20	150	.....	100
Iowa ¹	225	150	40	30	25	20	15	200	125	25	15	100	50	150
Kans. ¹	210	150	60	37	30	20	15	200	125	30	10	110	25	100
Ky. ¹	200	150	60	45	30	20	15	200	125	30	10	100	.....	.....
La. ¹	200	150	50	30	20	20	20	175	125	20	10	100	.....	.....
Maine ³	150	125	50	30	25	18	15	150	125	25	10	100	.....	.....
Md. ¹	200	150	60	30	25	20	15	175	150	25	10	100	.....	.....
Mass. ⁴	50	50	12	12	12	12	12	50	50	12	12	50	.....	.....
Mich. ¹	200	150	60	35	30	20	15	175	125	30	10	100	.....	.....
Minn. ¹	200	150	60	35	30	20	15	175	125	30	10	100	.....	150
Mo. ²	220	165	55	40	32	32	20	185	140	35	12	100	40	160
Mont. ¹	200	150	30	20	15	12	9	180	125	15	6	100	.....	.....
Nebr. ¹	225	175	60	35	30	20	15	215	150	30	10	125	50	100
Nev. ²	250	217	65	39	30	22	17	217	173	30	11	103	87	260
N. J. ²	200	150	60	35	30	20	15	175	125	30	10	100	40	160
N. Mex. ¹	150	110	30	20	15	10	9	140	100	15	6	100	25	135
N. Y. ¹	312	244	60	46	30	25	15	288	205	38	16	128	.....	.....
Ohio ²	200	150	60	35	30	20	15	175	125	30	10	100	.....	.....
Okla. ¹	250	200	60	35	30	20	15	175	150	30	10	100	.....	.....
Oreg. ²	416	329	104	69	39	35	26	381	277	43	17	173	156	416
Pa. ¹	215	175	.....	.....	.....	.....	.....	215	150	.....	.....	100	.....	.....
R. I. ⁴	50	50	12	12	12	12	12	50	50	12	12	50	.....	.....
S. Dak. ²	200	150	50	35	30	20	15	160	125	30	10	100	.....	.....
Tenn. ¹	200	150	60	35	30	20	15	175	125	30	10	100	.....	150
Tex. ¹	200	150	60	45	30	21	15	200	125	30	10	100	.....	150
Utah ²	200	150	30	20	15	12	9	180	125	15	6	100	.....	.....
Va. ¹	200	150	60	35	30	20	15	175	125	30	10	100	.....	.....
Vt. ²	170	140	40	25	20	15	10	170	120	20	8	100	43	170
Wis. ¹	320	240	70	32	20	12	14	300	180	25	8	140	40	160

¹ Payments under this schedule are exclusive of or in lieu of all other payments.² Payments under this schedule are in addition to payments for temporary total disability during the healing period.³ Payments cover total disability. Partial disability may be compensated at end of periods given for not over 300 weeks in all.⁴ Payments under this schedule are in addition to all other payments.

Comparison of Benefits.

Thus far the various compensation factors have been treated as individual units. In the following table an attempt has been made to determine what benefits would be received under each compensation law in a given accident. Four representative types of injuries were taken as follows: (1) Death, (2) loss of major hand at wrist, (3) total disability for a period of 4 weeks, and (4) total disability for a period of 13 weeks. The waiting period was deducted in com-

puting the benefits for both of the disability items and for the loss of the hand in case compensation for temporary total disability was provided by law.

The example taken was that of a married man, 35 years of age, receiving \$21 a week, and having a dependent wife, 30 years of age, and three normal dependent children, 3, 6, and 9 years of age. In computing the life expectancy of the injured man or his widow the American experience table of mortality was used.

The maximum benefits in each case have been given. The amounts computed for death include burial expenses where such are provided by law. It has been assumed that the loss of the hand resulted in a total disability of 26 weeks and a subsequent partial disability of 50 per cent for life. Several States have no schedules of specified injuries, and in such States the compensation for loss of the hand has been based upon the given percentage of wages for the given number of weeks limited by the maximum amounts. In such States, together with those States which provide for a continuing partial disability in addition to the specified scale, both compensations have been given, i. e., compensation for total disability only and compensation for total plus partial disability. Compensation for total disability during the healing period has been included in the amounts given for those States which provide for such benefits. For the total disability accidents, as already noted, the waiting period in each case has been taken into consideration and deducted from the amount of the compensation.

It has been the purpose to take an example which is most typical of all States and conditions. It is admittedly true that the specific example and the four items taken will result in a higher scale for some of the States than would have resulted had a different example been taken or had the whole scale of compensation benefits been considered. For example, compensation for the death of a married man with three children would result favorably for such States as Nevada, North Dakota, Oregon, Washington, New York, and West Virginia, which pay compensation until the death or remarriage of the widow.

In computing the money benefits no account has been taken of the present value of such benefits. A fixed lump sum paid outright at the time of the injury of course exceeds the present worth of the same amount paid in weekly installments over a period of years. In comparing the computed benefits, therefore, it is necessary to take this fact into consideration.

COMPARISON OF BENEFITS PAID UNDER THE WORKMEN'S COMPENSATION LAWS
OF THE SEVERAL STATES.

State.	Money benefits received in typical cases.			
	Death.	Loss of hand. ¹	Total disability accident.	
			4 weeks.	13 weeks.
Alabama.....	\$3,250	\$1,890	\$50.40	\$163.80
Alaska.....	4,800	2,400	21.00	136.50
Arizona.....	4,000	{ 273 2 4,000 }	42.00	136.50
California.....	3,276	2,853	40.95	163.80
Colorado.....	3,125	1,040	25.71	115.71
Connecticut.....	3,376	1,911	31.50	136.50
Delaware.....	4,994	1,659	42.00	136.50
Hawaii.....	5,100	2,562	37.80	151.20
Idaho.....	7,315	1,733	34.65	138.60
Illinois.....	4,000	2,402	54.60	177.45
Indiana.....	3,565	2,310	34.65	138.60
Iowa.....	3,880	1,890	25.20	138.60
Kansas.....	3,276	1,575	37.80	151.20
Kentucky.....	4,075	1,800	36.00	144.00
Louisiana.....	3,565	1,733	34.65	150.15
Maine.....	3,500	{ 1,575 2 2,678 }	32.40	145.80
Maryland.....	4,325	1,575	21.00	115.50
Massachusetts.....	4,000	{ 844 2 4,844 }	36.00	162.00
Michigan.....	3,780	1,890	37.80	163.80
Minnesota.....	3,880	2,100	42.00	168.00
Missouri.....	4,300	2,674	42.00	182.00
Montana.....	4,275	1,575	21.00	115.50
Nebraska.....	5,050	2,450	42.00	182.00
Nevada.....	15,672	2,606	59.63	193.80
New Hampshire.....	3,000	{ 210 2 1,679 }	20.00	110.00
New Jersey.....	3,250	2,095	30.86	138.86
New Mexico.....	3,540	1,155	21.00	115.50
New York.....	15,647	3,416	28.00	182.00
North Dakota.....	17,582	3,640	56.00	182.00
Ohio.....	5,150	2,150	42.00	168.00
Oklahoma.....	(2)	2,100	42.00	136.50
Oregon.....	13,837	2,005	45.36	147.42
Pennsylvania.....	5,406	2,100	30.86	138.86
Porto Rico.....			28.00	91.00
Rhode Island.....	3,000	{ 773 2 2,348 }	21.00	136.50
South Dakota.....	3,000	2,033	29.70	150.15
Tennessee.....	4,300	1,575	21.00	136.50
Texas.....	4,536	1,890	37.80	151.20
Utah.....	4,034	2,212	45.00	153.40
Vermont.....	2,557	1,859	31.50	126.00
Virginia.....	3,100	1,500	20.00	110.00
Washington.....	14,869	1,915	36.35	157.50
West Virginia.....	10,249	2,100	31.50	126.00
Wisconsin.....	4,468	3,276	40.95	177.45
Wyoming.....	3,030	1,348	38.88	174.00
United States.....	17,582	{ 358 2 11,954 }	50.00	176.00

¹ It is assumed that loss of hand causes decrease of 50 per cent in earning capacity.² Includes compensation for partial disability.³ Fatal accidents not covered.⁴ 10 per cent deducted to cover employee's contributions.

Medical Benefits.

The following tabular statement shows briefly the maximum medical benefits provided under the various compensation laws:

MAXIMUM PERIODS AND AMOUNTS OF MEDICAL SERVICE UNDER VARIOUS COMPENSATION LAWS.

State.	Maximum period.	Maximum amount.	State.	Maximum period.	Maximum amount.
Alabama.....	60 days.....	\$100	New Jersey.....	4 weeks ¹	¹ \$50
Alaska.....	.....	.....	New Mexico.....	2 weeks.....	\$50
Arizona.....	.....	.....	New York.....	60 days ¹	Unlimited.
California.....	Unlimited.....	Unlimited.	North Dakota.....	Unlimited.....	do
Colorado.....	60 days.....	\$200	Ohio.....	do.....	¹ \$200
Connecticut.....	Unlimited.....	Unlimited.	Oklahoma.....	60 days ¹	¹ \$100
Delaware.....	2 weeks.....	\$75	Oregon.....	Unlimited.....	¹ \$250
Hawaii.....	Unlimited.....	\$150	Pennsylvania.....	30 days.....	¹ \$100
Idaho.....	do.....	Unlimited.	Porto Rico.....	Unlimited.....	Unlimited.
Illinois.....	8 weeks ¹	¹ \$200	Rhode Island.....	4 weeks.....	do
Indiana.....	30 days ¹	Unlimited.	South Dakota.....	12 weeks.....	\$150
Iowa.....	4 weeks.....	¹ \$100	Tennessee.....	30 days.....	\$150
Kansas.....	50 days.....	\$150	Texas.....	2 weeks ¹	Unlimited.
Kentucky.....	60 days.....	\$100	Utah.....	Unlimited.....	\$500
Louisiana.....	Unlimited.....	\$150	Vermont.....	2 weeks.....	\$100
Maine.....	30 days ¹	¹ \$100	Virginia.....	30 days.....	Unlimited.
Maryland.....	Unlimited.....	\$150	Washington.....	Unlimited ²	do ²
Massachusetts.....	2 weeks ¹	Unlimited.	West Virginia.....	Unlimited.....	\$500
Michigan.....	90 days.....	do	Wisconsin.....	60 days ¹	Unlimited.
Minnesota.....	do ¹	¹ \$100	Wyoming.....	Unlimited.....	\$100
Missouri.....	8 weeks.....	\$200	United States.....	do.....	Unlimited.
Montana.....	2 weeks.....	\$50			
Nebraska.....	Unlimited.....	\$200			
Nevada.....	90 days ¹	Unlimited.			
New Hampshire.....	.....	.....			

¹ Additional service in special cases or in discretion of commission.

² Employees must pay one-half of medical cost.

It will be noted that three States (Alaska, Arizona, and New Hampshire) furnish no medical service except that in fatal cases involving no dependents the expenses of last sickness shall be paid by the employer. Six compensation acts ¹ provide unlimited service. Nine laws place no limitation upon the period during which medical treatment shall be furnished, but do limit the amount; while nine limit the period, but do not limit the amount. All of the other laws place limitations upon both period and amount.

Administration.

Some responsible administrative body is necessary to insure to the injured workman his rights under the law, and to see that he receives the full amount of his compensation immediately and regu-

¹ California, Connecticut, Idaho, North Dakota, Porto Rico, and the Federal Government.

larly. Eleven¹ of the 45 States, however, have no such administrative body. In these States compensation matters are settled directly by the parties concerned and in case of dispute the question is taken to the courts for adjudication.

Reports of Industrial Accident Boards.

Idaho.²

THE Industrial Accident Board of the State of Idaho submits as its first annual report an account of the operations of the law for a period of 10 months. Being of the nature of an introductory report, several pages are given to an account of compensation legislation in the United States, and more in detail to the history of the law of Idaho and the organization of the administrative board. An analytical statement sets forth the general provisions of the law of the State.

During the 10 months covered by this report there were 3,849 accidents reported, of which 3,083 have been finally disposed of. The law provides for a seven-day waiting period, and 1,463 cases of injury were of such brief duration as to receive no benefits on this account. Awards were made in 1,565 nonfatal cases, aggregating \$69,293.62, or an average of \$44.28 per case. In 18 fatal cases the awards aggregated \$95,664.74, or an average of \$5,314.71. The same average for 720 nonfatal and 43 fatal cases unsettled would bring the actual and estimated awards and compensation for the first 10 months up to \$425,372.49. To this should be added hospital bills totaling \$56,354.40, making \$481,726.49 as the total amount of benefits accruing to injured workmen during the first 10 months' operation of the law.

Computation is made of the wage loss actually suffered by reason of the waiting period of seven days prescribed by the act. This amount is based on the average reported wage of \$4.15 per day, and aggregates \$60,116.90. As the law provides for benefits on a basis of 55 per cent of the wages, it is evident that the injured workman bears not only the 45 per cent wage loss in every case, but the total of this additional \$60,116.90 by reason of such a moderate waiting period as the seven days provided for by the Idaho statutes.

The nature of the industries of the State is clearly reflected in the classification of accidents by industries, 1,209 occurring in lum-

¹ Alabama, Alaska, Arizona, Kansas, Louisiana, Minnesota, New Hampshire, New Mexico, Rhode Island, Tennessee, and Wyoming.

² First annual report of the Industrial Accident Board of the State of Idaho from January 1, 1918, to October 31, 1918. Boise, 1918. 24 pp.

ber and timber, and 1,067 in mining, quarrying, and metallurgy, these two groups furnishing more than two-thirds of the 3,083 closed cases of accidents under consideration. Manufacturing afforded but 112 cases, while construction furnished a larger number—197 in all. The nature of the industries also affects the number of fatal accidents, the report stating that:

The death rate in Idaho has gone far beyond the national standard, which is 0.932, or less than 1 per cent, while our experience has proven 1.584, or over 1½ per cent; that is, in every 100,000 accidents in Idaho there would be 1,584 deaths, while according to the national standard there should be but 932. There are two very good reasons for this: First, the proportion of workmen in the two hazardous industries of lumbering and mining is greater in Idaho than in the average State; second, our lumbering operations in great part are carried on in hilly country, which also is subject to continued snowfall and cold weather, with resultant increase in hazard far above level country and more moderate climatic conditions.

A suggestive incident relates to the refusal of a municipality to insure its liabilities under the law, it claiming a right to carry its own risk. Two serious accidents occurred to its employees during the year, so that it "finds itself confronted with a liability approximately ten times greater than would have been the cost of insuring with the State fund as contemplated by the law."

The law permits payments to nonresident alien dependents only in proportion as the country of citizenship permits payment in corresponding circumstances; but difficulty has been experienced by the commission in discovering the provisions of the laws of residence of a number of claimants, and in view of the extreme unlikelihood of any practical reciprocal adjustment ever being made, this provision would seem to be more of a burden than any practical benefit, unless the purpose is to exclude nonresident alien beneficiaries.

Maryland.¹

THIS report is limited to a brief statement of the operations of the board, the value of laws of this type being regarded as so fully established as to require no discussion. During the year 42,570 reports of industrial accidents were received, of which 5,015 claims were disposed of during the year; 163 were claims based on deaths. Claims were allowed in 4,826 cases and disallowed in 387 cases; 129 cases remained pending, as against 310 pending cases remaining from the preceding year. Benefits awarded aggregate \$884,919.24, of which \$120,930 was reported as medical expense on accidents not resulting in claims.

¹ Fourth annual report of the State Industrial Accident Commission of Maryland, for the year November 1, 1917, to October 31, 1918. Baltimore, 1919. 40 pp.

Out of 5,015 claims through the year, 163 were for fatalities, 6 for permanent total disability, and 458 for permanent partial disability. Mining and quarrying furnished 263 accidents, manufacturing 2,058, and construction 1,544.

A State accident fund is maintained in competition with other insurance systems, having in force at the end of the year 1,438 policies. This is a comparatively small fraction of the 9,456 employers insured under the act, but an encouraging growth is indicated in the fact that, as compared with the past year, the net premiums show an increase of 46 per cent, the total for the year covered being almost equal to the combined premiums of the two preceding years. The loss record was 49.6 per cent on the premiums written and the expense ratio was 8.4 per cent. A catastrophe reinsurance of 4 per cent and a catastrophe reserve of 10 per cent bring the total cost of insurance up to 72 per cent on the premiums written. This report was regarded as "exceedingly gratifying" in view of the number of inexperienced workmen employed in numerous war activities. The fund was the subject of an audit by the State auditor during the year, and though some minor errors in bookkeeping were disclosed, the books and accounts were reported as "correct." Assets aggregate \$369,921.63, with a total net surplus of \$199,046.96.

Montana.¹

THE Industrial Accident Board of Montana is charged with the administration not only of the compensation law of the State but also with the inspection of mines and steam boilers. Nearly one-half of the present volume is taken up with an account of its inspection work and a reproduction of the laws enforced by it.

In the portion devoted to the compensation law, several pages are given over to a general consideration of the principles involved; a reproduction of the opinion of the Supreme Court of Montana in the case of *Shea v. North Butte Mining Co.*, in which the constitutionality of the compensation law was upheld; discussions of particular features of the law, medical and hospital service, waiting period, coverage, State funds, etc. The problem of the crippled workmen is considered at some length, and rehabilitation is strongly urged. It is estimated that the 609 permanently crippled men, reported during the four years of the operation of the law, could be restored to industry at a total cost not exceeding one-half of the

¹ Fourth annual report of the Industrial Accident Board, for the 12 months ending June 20, 1919. Helena, 1919. 437 pp.

economic loss represented by their food alone, and that their restoration to industry would give a net gain of \$280,000 a year. It is recommended that a rehabilitation fund be formed by contributions from employers in cases where fatal accidents occur leaving no beneficiaries or dependents, as is done in the State of New York to provide a fund for compensating second injuries resulting in total disability.

A point of interest is the number of cases (in excess of 6,000) that have come before the board for adjudication during the period of its existence without a single appeal being taken to the courts from the rulings made. The case taken to the supreme court was on a friendly suit for the purpose of securing an authoritative ruling as to the construction of the law.

Three plans of insurance is permitted: First, self-insurance; second, insurance in a private company; and third, insurance in a State fund. Under the first and last plans there have been practically no disputes and very few delays in settlement, the State fund showing but 14 cases in which the payment of compensation was delayed beyond the day when it was due. "Unfortunately, under plan 2, many of the insurance companies are dilatory in the payment of compensation, and in many cases the first payment on disability cases has not been made until 90 days after the accident, due to the necessity of the claim being sent to the eastern office of the company for adjustment."

The statistical tables show the accidents, awards, etc., under each insurance plan, separately. Risk classes are reported on separately as to the rates, incomes, benefits, and balances in the State fund. The total assets of the fund amount to \$500,462 at the end of the year, with an available balance of \$94,279. The premium income for the year covered by the report was \$181,709, of which \$68,708 was paid out in compensation. For the four fiscal years during which the fund has been in existence the premium income was \$386,390, of which \$64,835 has been expended for compensation, distributed as follows: For temporary total disabilities, 40 per cent; for permanent partial disabilities, 18 per cent; for fatal injuries, 27 per cent; doctors and hospital bills, 11 per cent; funeral expenses, 2 per cent.

The report shows 1,970 employers under the act as of June 30, 1919, with 50,386 employees; of these, 64 employers with 24,848 employees are self-insurers; 874 employers with 10,857 employees are insured in private companies; and 1,032 employers with 14,681 employees are insured in the State fund. During the year 1918-19, 5,475 accidents were reported, of which 122 were fatal; 1 caused a permanent total disability; 151, permanent partial disability; and 5,201, temporary total disability.

A computation is made of the time and wage loss on account of accidental injuries during the four years covered by the law. The total time loss is given as 256,738 days, entailing a wage loss of \$1,075,085, or an average of \$4.19 per day. The greatest loss is 132,677 days in mining other than coal, the wage loss being \$573,693; next in order is smelters, 30,435 days, with a wage loss of \$125,107. Coal mining and logging and lumbering come next in rank. Evidently, in addition to the above, should be considered the loss due to accidental death: 688 fatalities have been reported, the average age of the decedents being 33 years. On the basis of the American experience table of mortality, these deaths represented a time loss of 22,015 years, or at the average daily wage in the State a wage loss of approximately \$30,000,000.

Medical Treatment for Government Employees Under Federal Compensation Act.

HOW the Employees' Compensation Commission of the United States Public Health Service has dealt with the problems involved in securing proper and adequate medical service for injured Government employees is explained by Dr. John W. Trask, medical director of the commission, in the October issue of *Modern Medicine*.¹ The experience of the commission is not only interesting, but, being practically suggestive, ought to be of value to all who are concerned in the provision of hospital benefits for large numbers of employees.

The benefits provided by the United States Employees' Compensation Act to employees of the Government injured in the performance of duty are of three classes: (1) Medical and hospital treatment; (2) money compensation for loss of wages in excess of three days; and (3) money compensation to the surviving dependents of employees dying as a result of injuries. Dr. Trask's article concerns only the first of these classes, which is covered by the following section of the law:

That immediately after an injury sustained by an employee while in the performance of his duty, whether or not disability has arisen, and for a reasonable time thereafter, the United States shall furnish to such employee reasonable medical, surgical, and hospital services and supplies unless he refuses to accept them. Such services and supplies shall be furnished by United States medical officers and hospitals, but where this is not practicable shall be fur-

¹ Medical and hospital treatment under United States compensation act. By John W. Trask. In *Modern Medicine*, October, 1919, pp. 489-495.

nished by private physicians and hospitals designated or approved by the commission and paid for from the employees' compensation fund. If necessary for the securing of proper medical, surgical, and hospital treatment, the employee in the discretion of the Commission, may be furnished transportation at the expense of the employees' compensation fund.

Reasonable medical service is defined by Dr. Trask as unlimited medical service.

It [the law] provides that medical service for an injury shall be furnished for a reasonable time after the injury. As a reasonable time will be as long as the injured person has need of treatment on account of the injury, the service is coexistent with the need thereof.

The provision that the medical and hospital service furnished shall be reasonable limits it to that which may properly be considered to be effective in bringing about the restoration of damage done by the injury; that is, the restoration in so far as possible of the injured person to the physical condition possessed by him previous to the injury. This implies efficiency of the service rendered.

The problem, then, becomes entirely one of how best to secure efficient medical and hospital service for Government employees who may be injured while at work in any part of the country. As most injuries are of an emergency nature and require immediate treatment, it is necessary that such treatment be available wherever employees are located. Such provision has been made by the dispensary service furnished by the War Department at its arsenals, principal ordnance plants, and supply depots, and by the Navy Department at its navy yards; and the United States Public Health Service has cooperated by making freely available to all beneficiaries of the compensation act its hospitals and dispensaries, wherever located. When, however, the injury occurs in a locality in which no Government hospital or dispensary is provided, it must be treated by a physician or at a hospital designated by the commission; and as United States hospitals and medical officers have a relatively limited distribution, the designation of such hospitals and physicians involves problems of great importance for which the commission has found the best solution only through its experience in dealing with them. In this connection Dr. Trask says:

The idea was first held that the necessary medical, surgical, and hospital service for injured employees could be best obtained wherever Government hospitals and dispensaries were not available by the designation and use of hospitals, as it was believed that the hospital represented group medicine; that the injured employees could be sent to the hospitals and there would receive the attention of whatever specialist the nature of their various injuries indicated, be it the general surgeon, orthopedic surgeon, ophthalmologist, neurologist, roentgenologist, pathologist, or bacteriologist; that the question of medical and surgical treatment could be left to the hospital; and that only where there was no Government hospital or dispensary, or private hospital, would there be need of designating private physicians.

The commission, however, early found that leaving the question of medical and surgical treatment to the hospital was not a practicable arrangement; that the hospital service as relates to bed, board, and nursing was in most city hospitals a thing quite apart from the furnishing of the efficient medical and surgical attention implied by the Federal compensation act. Patients sent to hospitals were frequently given scant consideration. If assigned to a particular physician, it was often to one of lesser experience. Often the cases seemed to be left entirely to the inadequate attention of the busy resident staff. This was true in general, excepting in the proprietary hospitals in the smaller towns. It was true even of the better hospitals, one might say of the best hospitals, of the larger cities.

This point is illustrated by detailed accounts of several cases in which suffering was entailed and recovery delayed by inefficient treatment given the patients at the hospitals to which they were sent. The commission has now adopted the method of designating, in connection with each hospital, one or more competent, well-trained surgeons of established reputation, and it requires that every compensation case going to the hospital shall be placed under the immediate care of one of the designated physicians. Under this arrangement the hospital renders its bill for hospital care and the surgeon renders his bill for professional attention. "This insures to the injured employee the personal and interested service of a competent physician, and gives to him the same close attention he would receive as a private patient of a reputable, competent practitioner. If the services of other specialists or consultants are required, the attending surgeon secures such services, submitting bills therefor."

When the commission first began the designation of physicians and hospitals the question of the required qualifications of the physicians or surgeons selected seemed to present a serious problem, as it was feared that the charges of highly qualified, experienced men, particularly surgeons, would be exorbitant. Experience soon proved, however, that the commission could not afford any but the most competent men available in the locality, as the handling of injury cases by men of insufficient training or experience frequently resulted in the making of permanent cripples, particularly in bone and joint injury cases, which might have been prevented by the services of competent orthopedic surgeons. In this connection Dr. Trask says:

The commission was happy and, in a measure, surprised to find that the bills presented by the well-trained and experienced surgeons were in general no greater than the bills presented for treatment of similar cases by men of inadequate and insufficient training. In fact, the charges made by the most competent men have been on the whole the most reasonable, particularly so when the much better service rendered is considered. A permanent cripple is a charge against the commission as long as he lives. Every employee restored to work, every cripple prevented, is an economy.

Another question which had to be decided by the commission after due consideration was whether or not to adopt a schedule of rates or charges for medical services. The decision was against such a fee schedule.

The plan adopted was to use as great care as possible in designating under the provisions of the act, only men with adequate training and considerable experience in surgery, of mature age, and of established reputation in their respective communities; and then to explain to those appointed that the purpose of the commission was to secure service; that in bone or joint injuries the commission expected X-ray examination and control; that where there appeared to be any reason therefor, neurologists, pathologists, or other specialists should be called in consultation; that the purpose of the commission was to make the best possible restoration of the injured person; and that as regards charges the commission merely expected that the charges would be reasonable for the service rendered.

The commission has found that this arrangement was acceptable to and welcomed by the class of men they selected—a class of men whose services it would have been impossible to obtain under the limitations of a fee schedule—and this notwithstanding the fact that the fees actually charged have been within the limits of any reasonable fee schedule which might have been adopted. Should the commission find one of its designated surgeons giving inadequate service or making unreasonable charges, it has recourse to cancellation of his designation; but there have been exceedingly few instances in which this has been called for.

The plan now followed by the commission is to designate the physician and then to ask him to indicate the hospital he would like to use for the injury cases requiring hospital treatment. The injured employee is sent to the surgeon or physician, and, if a hospital case, he is then sent to the hospital, or, if the injury is serious, he is sent direct to the hospital and the physician is notified. The patient is usually placed in the general ward of the hospital, but a private room and special nurse are allowed when, in the opinion of the physician, such are necessary. In fact, any service actually needed by the patient is allowed. In the event of a patient who is assigned to a ward desiring a private room for his own convenience he may secure one by paying the difference between the ward rate and the rate for the room.

The experience of the commission is summed up briefly as follows:

- (1) In Government hospitals and dispensaries the service rendered varies with the training and personality of the members of the staffs.
- (2) In non-Government hospitals good medical and surgical service is usually not obtained unless the cases are put in charge of selected physicians or surgeons paid by the commission.
- (3) Paying the "doctor's" bills for an injured employee is not synonymous with furnishing reasonable medical and surgical service.
- (4) Reasonable and adequate medical and surgical service can be obtained only from conscientious physicians and surgeons with good training and experience.

SOCIAL INSURANCE.

Attitude of Medical Society of the State of New York Toward Compulsory Health Insurance.

THE attitude of the Medical Society of the State of New York toward compulsory health insurance, proposed for legislative enactment, is set forth in a report drawn up by a special committee appointed by the president of the society to study the subject of compulsory health insurance with special reference to its relationship to the medical profession, which report was adopted by the house of delegates of the society on November 22, 1919. The report gives a brief résumé of the subject, outlines the provisions of the proposed legislation, and concludes with a statement of findings and a recommendation that the medical society "unqualifiedly oppose the enactment by the Legislature of the State of New York of any law instituting a system of compulsory insurance against sickness because of its menace to the public health of the State." The committee's statement, together with its findings and recommendation, as adopted is as follows:

The essential components of all compulsory health insurance schemes are two: First, the provision of a cash indemnity during a relatively brief period of incapacity to labor due to illness; secondly, the provision to the insured and their dependents during a determinate time of so-called medical benefits which comprise medical, dental, and nursing attendance, hospital and sanatorium accommodations, maternity attendance, drugs, and all necessary medical and surgical supplies.

The proponents of this legislation rest their demand for the institution of this scheme in America upon two main allegations: First, that a very large amount of poverty is due to illness causing consequent unemployment and loss of income; secondly, that a vast amount of the population receives inadequate and insufficient medical attendance; that is, that medical attendance is grossly deficient both as to quantity and quality.

With the general features of the measures proposed for the legislative enactment of the compulsory health insurance scheme in this State your committee will deal only in the briefest manner; the matter is familiar to you. It is proposed to establish an administrative machinery radiating downward from a division of the State industrial commission composed of a certain number of commissioners appointed by the governor who, in turn, appoint a chief of the

bureau of health insurance. Subordinate to the commission and acting under regulations made by the commission function the boards of directors of the local funds composed of three members elected by the employer members of the local fund, three elected by the employees and one additional elected by these six. All the affairs of the funds are administered locally by these boards of directors. Each local fund employs a medical officer who is permitted to practice and who is practically the medical supervisor of the administration of the benefits of the act. The medical profession is not represented upon any executive body under the proposed law, but is permitted to function solely through advisory committees, local and State. Its sole statutory representative has an administrative, not an executive function.

After consideration of the evidence put forward by the proponents of this legislation in support of their statement that a large proportion of the poor have been impoverished through unemployment caused by illness, your committee finds that none of this evidence is unimpeachable and that it rests upon largely a priori reasoning. The preponderance of evidence is against the fact that any considerable amount of impoverishment is caused by illness; moreover in those cases where impoverishment is caused by illness, it is due to the long-enduring disability preceding death occurring in the chronic diseases, especially tuberculosis, chronic heart disease, cancer, chronic joint infections, renal and vascular disease which cause a disability long exceeding the period of 26 weeks during which the insured is entitled to benefits under the scheme. The statistics of the labor bureau of New York State show that in the main disability from all causes, including accident, injury, and illness, is the source of, on the average, only 5.7 per cent of unemployment, about the same amount as that caused by weather conditions (5.6 per cent) or a little less than half that caused by labor disputes (10.6 per cent), or one-thirteenth that due to lack of work (74.6 per cent). A survey entitled "Poverty in Baltimore and Its Causes; Study of Social Statistics in the City of Baltimore," by the Alliance of Charitable and Social Agencies, McCoy Hall, Baltimore, Md., November 15, 1918, gives strong evidence of the small part illness plays in the cause of poverty; moreover, it evidences strikingly the fact heretofore stated as to the relationship of prolonged disability not covered in any scheme for health insurance to the relatively few cases of impoverishment due to sickness. Your committee would find, therefore, that short illnesses causing ephemeral disability bear no relation to poverty; that where impoverishment is caused by illness it is in all instances due to long-continued disability; and that illness is but a very minor cause of unemployment as compared even to the conditions of the weather or labor disputes.

Your committee is unable to find any available evidence that will bear inspection proving that, in the main, medical attendance in this State is grossly deficient in quantity or grossly defective in quality. If these facts were true it is unable to satisfy itself that the people of this State would receive a larger and closer degree of medical attention where one physician may care for either 2,000 or more patients as permitted under this scheme than they now receive where the proportion of physicians to population is about as 1 is to 780. Moreover, your committee is satisfied that the quality of medical attention would no more be benefited in the United States than it has in Germany, Austria, and Great Britain, by the conversion of medical practice from its present plan into an enormous scheme wherein the practitioner would be employed from year to year under contract, and in the final analysis subject to lay dictation as to means and methods of practice.

Your committee feels very strongly that the inquisitorial powers which would be conferred upon the State industrial commission and its agents, and upon the local boards of directors must be considered in its effect upon the public health, and especially as to the rôle it might assume in submerging and nullifying the activities of the present State department of health which has played so large a part in the reduction of morbidity and mortality by means of preventive, not palliative, medicine.

There is no uncertainty about the evidence that the relative morbidity rate, mortality rate, infant-mortality rate, and maternal-mortality rate has been much more materially reduced in the United States during the past 20 years than it has been in Germany and Austria, where compulsory health insurance, not alone, but the whole scheme, including invalidity and unemployment insurance and old-age pensions, have been in force. It can, therefore, be seen that compulsory health insurance, as such, plays a very small part in the reduction of length and severity of illness, and that on the whole it has been of extremely little value medically in those countries, while it has been the cause of a profound deterioration in medical service and medical morale. Even in England, where it has been in operation for a comparatively short time, it has proven so defective and ineffective for the purpose for which it was instituted that it is now proposed to inaugurate the plan of State medicine to supplant it.

Your committee therefore finds:

1. There is no necessity for the institution of a scheme covering the major portion of the population of the State, providing for the institution of contract medical practice on a colossal scale in order to furnish medical attendance and other services.

2. In those countries where this scheme has been in operation for many years it has caused a deterioration in medical morale and medical service, and that its effect in this State would be the same; that is, a lessening in the quality of medical service.

3. In comparison with those countries where this scheme has been in operation, the United States shows a more marked reduction in mortality rate, both general and as affecting maternal and infantile mortality rate. Apparently the morbidity rate under the scheme has doubled instead of being diminished in Germany and Austria since the institution of the social-insurance plan.

4. There is danger of the scheme gradually undermining the functions so extremely valuable to the community at present subserved by the State department of health.

5. Owing to the paucity of accurate and unimpeachable data collected by means of an unbiased investigation, your committee recommends that the legislature of 1920 be requested to appropriate a sufficient sum of money for the use of the health department and such other departments in association with it as it requires for the purpose of making a survey of the State of New York to determine the amount and character of illness in its economical relation to the Commonwealth.

6. If additional legislation is to be enacted, it should provide for a greater development of existing agencies for preventive medicine, together with the extension on a large scale of the present county and municipal functions for both preventive and remedial medicine, and it should make further provision for the inauguration of more widely extended utilization of the present institutional clinical facilities for the diagnosis and treatment of disease in order to facilitate the access of the entire population of the State to modern methods in the practice of medicine.

Your committee therefore recommends that the house of delegates, and, through them, the Medical Society of the State of New York, unqualifiedly oppose the enactment by the Legislature of the State of New York of any law instituting a system of compulsory insurance against sickness because of its menace to the public health of the State.

Report of British Departmental Committee on Old-Age Pensions.¹

THE departmental committee appointed by the Treasury in April, 1919, "to consider and report what alterations, if any, as regards rates of pension or qualification should be made in the existing statutory scheme of old-age pensions" have presented their report.²

Old-age pensions were first introduced in the year 1908. The rate was 5s.³ to those whose yearly means did not exceed £21 a year (about 8s. a week), while reduced pensions were payable to those whose incomes exceeded £21 but did not exceed £31 10s. a year (about 12s. a week). The pensioner must have attained the age of 70; must be a British subject, resident in the United Kingdom; and must not be in receipt of poor relief (other than medical or surgical relief). There were also certain disqualifications for convicted criminals, for pauper or criminal lunatics, and for those who "had habitually failed to work according to their ability, opportunity, and need."

Various changes, mostly of detail, were made by an amending act of 1911. During the latter part of the war and up to the present time an additional allowance of 2s. 6d. a week has been given to pensioners whose means do not exceed the statutory limit (of £31 10s. a year); and existing pensions have not been reduced or revoked in consequence of increase of means if such increase was due (1) to separation allowances or voluntary allotments; (2) to temporary voluntary assistance, up to 5s. a week, to meet the increased cost of living; or (3) to additional earnings, provided that the total means do not exceed 30s. a week.

The total number of persons in receipt of old-age pensions on March 31, 1919, was 920,198, of whom 911,706 were in receipt of the additional allowance granted during the war. Over 90 per cent of the pensions were of the full value of 5s. The number of claims made during the year ended March 31, 1919, was 142,084. The number of claims rejected, or pensions revoked, during the year was

¹ Reprinted from the Labour Gazette, London, November, 1919, p. 465.

² Cmd. 410. Price, 3d. net.

³ Owing to present fluctuations in value of the English pound conversions are not made into United States money. Normally the par value of the pound is \$4.87.

47,766; and in addition 6,615 claims lapsed, or were withdrawn, etc. The number of pensioners who were reported to have died during the year was 105,746. The total amount paid in pensions rose from £8,468,000 in the year ended March 31, 1910, to £12,607,000 in the year ended March 31, 1916. The amount in the last financial year (ended March, 1919) was approximately £11,731,000, to which must be added the additional allowance, amounting to £5,997,000.

The majority report, signed by the chairman and nine other members of the committee, makes the following recommendations:

(1) Rate of pension to be increased to 10s. a week, absorbing the additional allowance of 2s. 6d.

(2) Abolition of means qualification.

(3) Qualifying age to remain at 70, pending inquiry as to the possibility of extending the scope of the insurance acts. (The committee emphasize the need for this inquiry, as an integral part of the whole question of "public assistance" on a reformed basis.)

(4) Outdoor relief, or "home assistance," not to be a disqualification for receipt of pension.

Other recommendations deal with eligibility of aliens—in which connection it is recommended that the British-born wives of aliens should not be disqualified—with the qualifying period of residence, and with other matters. It is suggested that the "failure to work" qualification, which is virtually inoperative, should be abolished.

Seven members of the majority append reservations; five of the seven favor an increase in the amount of the pension (to 12s. 6d. or 15s.) and a reduction in the age to 65.

Seven members of the committee present a minority report, concurring in the increase of the rate of pension to 10s. (one of the seven recommends 12s. 6d.), and in certain other proposals of the majority, but not in the abolition of the means limit. They recommend, however, that the means limit should be doubled, i. e., that it should be £42 a year for a full pension, and £63 a year for any pension at all.

Accident Insurance Law of France Amended to Include Occupational Diseases.¹

THE accident insurance law of France was amended by the law of October 25, 1919, so as to include occupational diseases.

The occupational diseases covered by the law are specifically mentioned in an annexed schedule. Such diseases may be either acute or chronic but must result from regular occupation in any of

¹ Journal Officiel de la République Française, Paris, Oct. 27, 1919 p. 11973.

the industries named. This list is subject to revision by subsequent legislation.

The employer is responsible for sickness of this class occurring within a period of one year from the date on which the employee quits work. That responsibility, however, diminishes in proportion to the length of time intervening between the date of quitting service and the date when sickness results in incapacity to labor. If during this period the incapacitated person has other employment, in the same class of establishment, the last employer becomes jointly responsible for a portion of the compensation provided for by the original act.

If, by reason of the inexcusable fault of either of the employers, the health of an employee is affected, the employer at fault may be held for an increased proportion of the compensation payable. The last employer is responsible for the payment of the entire compensation, having recourse against the former employers for recovery of the portion due from them.

Employers, making a declaration that in their processes of manufacture they no longer employ substances causing any of the industrial diseases mentioned in this law, are subject to its provisions only in cases where disability occurs within one year from the date of such declaration. Making false declarations is a penal offense.

A person incapacitated by such sickness and demanding compensation must notify the mayor of the commune within 15 days from the date such incapacity begins.

The scope of the national accident fund (law of July 11, 1868) is extended to include sickness and death due to occupational diseases. Insurance rates are to be promulgated within six months and must be sufficient to cover the risks without the necessity of drawing upon the subsidy mentioned in the original act.

Employers becoming liable to compensation may relieve themselves of their liability by depositing the capitalized value of the pensions awarded with the national retirement fund (*caisse National des Retraites*), which for this purpose shall prepare present-value tables based upon the mortality of victims of occupational diseases and of their survivors. Until such tables have been prepared the capitalized value of pensions shall be determined in accordance with tables in use for Government pensions in pursuance of the law of July 20, 1886.

Public administrative regulations shall determine the conditions under which guaranty and insurance companies may insure employers against the risks covered by the present law.

It is a violation of law for any person whatever, by threats, gift, promise of money, payment of medical charges or for medicine, to

entice or attempt to entice any person suffering from industrial diseases to any clinic, physician, or pharmacy against the will of the sick person. The latter has the right to designate the physician or druggist he wishes to be employed.

The following industrial diseases and industries are specifically mentioned as being covered by the amended act:

Class 1.—Lead and its compounds.

Disability due to lead colic, articular rheumatism, extensor paralysis, hysteria, nephritis, gout.

Industries: 1. Lead smelting and refining; 2. Casting, rolling, and adjusting of lead or its alloys; 3. Manufacture of type from lead alloys; 4. Manufacture of tin vessels with lead alloys; 5. Soldering with lead alloys; 6. Operating typesetting machines which use lead alloys; 7. Plating with lead alloys; 8. Casting toys made of lead alloys; 9. Manufacture of tin-foil caps for bottles, using lead alloys; 10. Melting old cans; 11. Handling lead type; 12. Manufacture of lead compounds (white lead, minium, litharge, chromate of lead, etc.); 13. Color mixing, lead base; 14. Painting with lead colors; 15. Manufacture of lead accumulators; 16. Manufacture of drying compounds and lead varnishes; 17. Manufacture of pottery and stoneware having a lead enamel; 18. Decorating porcelain with lead compounds; 19. Enameling of metals with lead enamel; 20. Varnishing or lacquering with lead products; 21. Dyeing with lead colors; 22. Glass polishing with pewter.

Class 2.—Mercurial poisoning.

Sickness: Mercurial stomatitis, mercurial palsy, nutritive disorders due to mercurial poisoning, mercurial cachexy, mercurial paralysis.

Industries: 1. Distillation of mercury; 2. Manufacture of incandescent lamps and radiographic ampulla with the aid of mercury tubes; 3. Manufacture of mercurial barometers, manometers, and thermometers; 4. Gilding, silver plating, and mercurial plating; 5. Manufacture of salts of mercury (azotete, chlorurets, cyanure, etc.); 6. Carotting of furs; 7. Furrier, employing mercury; 8. Bronzing and damaskeening with salts of mercury; 9. Taxidermy, employing salts of mercury; 10. Manufacture of gun primings with fulminates of mercury.

Social Insurance in Portugal.¹

BY decrees Nos. 5636 to 5639, inclusive, the Republic of Portugal recently inaugurated the policy of compulsory insurance covering sickness, invalidity, old age, and industrial accidents.

Sickness insurance.—The first of these decrees relates to sickness insurance. Insurance is obligatory for all persons 15 to 75 years of age engaged in any honorable occupation, whose annual income or

¹ Boletim da Previdência Social. Ano II, No. 7, Outubro a Maio de 1919. Lisbon.

earnings does not exceed 900 escudos.¹ All such persons are required to become members of a compulsory mutual insurance association by the payment of a weekly or monthly premium. The employer is authorized to deduct such dues from the wages of the employee and make regular payment into the fund.

As a temporary measure members are divided into three classes, paying 0.50, 0.40, and 0.30 escudos, respectively, as monthly premiums.

Benefits vary with the class in which insured, and continue for one year, divided into four periods, as follows:

AMOUNT OF DAILY COMPENSATION PAYABLE, BY CLASS AND BY PERIOD.

Class.	Period.			
	First 30 days.	Second 30 days.	Third 30 days.	Last 275 days.
	<i>Escudos.</i>	<i>Escudos.</i>	<i>Escudos.</i>	<i>Escudos.</i>
Class No. 1.....	0.30	0.22	0.14	0.10
Class No. 2.....	.24	.18	.12	.08
Class No. 3.....	.16	.12	.08	.04

The scale of compensation is subject to revision every second year.

Membership for six months entitles any member, in addition to the pecuniary benefits, to baths and open-air treatment; and for two years to certain death benefits, etc., payable to his survivors. After three months' membership the insured and his wife and children under 14 years of age are entitled to free clinical service and medicine.

Persons whose annual earnings, wages, or income exceed 900 escudos are required to pay a premium as follows: From 900 to 1,850 escudos, 0.50 escudo; from 1,850 to 3,800 escudos, 1 escudo; from 3,800 to 5,000 escudos, 2 escudos; over 5,000 escudos, 3 escudos.

A mutual insurance association must be established in each municipality. In municipalities where a mutual sick benefit association is in operation it must, within 60 days from the date of the decree, reorganize on the basis of a compulsory insurance association. In Lisbon and Porto six mutual associations shall be established in each ward.

Invalidity and old-age insurance.—Insurance against invalidity and old age, and for compensation to survivors is compulsory for all persons earning less than 900 escudos, with the exception of the following classes: Public officials entitled to pensions; soldiers employed as laborers; infirm persons incapable of earning one-third average

¹ Owing to fluctuations in exchange value no attempt is made in this article to make conversions into United States money. The normal value of the escudo is \$1.08.

wages and entitled to free subsistence; wage earners, employees, and establishments already insured.

Invalidity is defined as absolute inability, due to natural causes, to perform any work.

The municipal officials of each parish shall cause a census to be taken of all classes of employees between the ages of 15 and 65 years.

The insurance is under State supervision, under the direction of the Institute of Compulsory Social Insurance. The insured is entitled to a deferred annuity, and a pension is provided for the surviving widow and for orphans.

The fund is constituted (1) by a 6 per cent assessment on all salaries or wages up to 900 escudos, payable by the employer, (2) by a like assessment of $1\frac{1}{2}$ per cent payable by the employee, and (3) by an annual subsidy by the State of 13.33 escudos for each soldier recruited. Payments are made by special stamps placed in the book held by the insured. The proportion of funds payable by employers, employees, and the State is subject to revision every second year.

In case of invalidity the annuity varies with the number of premiums paid into the fund: (1) Payment of 235 weekly premiums (47 payments per year for five years) entitles the insured to a pension equal to one-sixth of the total deferred annuity which may be acquired under the law; (2) payment of 470 weekly premiums (from 6 to 10 years, inclusive), to a pension equal to one-third of full annuity; (3) of 705 weekly premiums (from 11 to 15 years, inclusive), to one-half of full annuity; (4) of 940 weekly premiums (16 to 20 years, inclusive), to two-thirds of full annuity; (5) of 1,175 weekly premiums (21 to 25 years, inclusive), to five-sixths of full annuity; and (6) of 1,410 premiums (after 30 years) to full annuity.

The full old-age annuity becomes payable when the insured reaches 70 years of age, provided the full 1,410 premiums have been paid.

A transitory period of 25 years is established, in order to provide for those whose age at the time old-age insurance is effected does not permit them to make the full number (1,410) of weekly payments. Those who are 45 years of age at the time the fund is instituted will receive 75 per cent of the full annuity, those over 50 years of age 50 per cent, and those over 60, 25 per cent.

Annuities for dependents may be provided for by the payment of 1 per cent of the earnings of the person insured, and are graduated in amount according to the number of years of membership of the insured and amount of premium paid.

The children of deceased insured persons not entitled to old-age or invalidity pensions but who have paid the required premiums, shall be paid 10 escudos per month for the six months following the death

of the insured. In case a widow is left without children she is to receive 50 escudos, payable in five monthly installments. Where there is neither widow nor children, ascendants are to be paid 60 escudos.

Any mutual aid association in existence which provides pensions for inability to labor may become associated with the Social Insurance Institute by transferring its invalidity, old-age, and widows' and orphans' funds to the institute.

All mutual sickness funds, parish councils, and labor associations are required to aid the institute in its supervision, for the purpose of carrying into effect the provisions of this decree.

Industrial accident insurance.—Industrial accident insurance is compulsory for every person employed by another in any branch of labor, either mental or physical. Every employer is required to insure his salaried employees and wage earners. The benefits consist of free medical attendance, medicine, and the pecuniary compensation.

Industrial accidents include injuries due to accident, functional disturbances, and industrial poisoning arising in the course of the employment and sickness proven to be due to the employment.

The establishment, employer, State, and administrative corporations (municipalities) are respectively responsible to their employees for the payment of compensation for industrial accidents. These may transfer their individual responsibility to mutual associations, recognized insurance companies, or the compulsory sickness insurance fund.

Each municipality must establish one or more mutual employers' or mixed accident insurance associations for the sole purpose of effecting this insurance and maintain a register of all employers, wage earners, salaried persons, etc.

The pecuniary compensation provided for is as follows: For death, 20 per cent of the annual earnings of the deceased to the widow, so long as she remains such, 15 to 60 per cent to the children (boys under 14, girls under 16), according to the number, and there being no children, 10 per cent to each of the dependent ascendants, but not to exceed 40 per cent in all; for disability—(a) permanent total, 66 $\frac{2}{3}$ per cent of annual earnings, (b) permanent partial, 50 per cent of wage loss, (c) temporary total, during disability, 66 $\frac{2}{3}$ per cent of earnings, (d) temporary partial, 50 per cent of wage loss.

Compensation is computed on full annual earnings up to 900 escudos plus one-half of earnings in excess of that sum.

The cost of the insurance is to be borne by the employer, deductions for this purpose from employees' earnings being prohibited.

Every employer who fails to insure as provided for must deposit with the Minister of Labor cash, a mortgage, guarantee, or bond in a sum equivalent to the reserve required to comply with this decree.

Insurance Institute.—A Compulsory Social Insurance and General Provident Institute is established for the supervision of all classes of compulsory insurance.

LABOR DEPARTMENTS.

Proposed Organization of New York State Department of Labor.

IMPRESSED with the necessity for simplifying the government of the State of New York, the governor appointed, in January, 1919, a nonpartisan reconstruction commission to make a report on retrenchment and reorganization in the State government. This commission has issued a summary, which is part one of its complete report.¹

In prosecuting its inquiry the commission found that in nearly every State public attention has been forcibly drawn to the necessity of reducing expenditures or at least of holding them to the lowest point consistent with the proper discharge of public functions and fair conditions of employment.

The commission also found that the movement for economy and efficiency has passed beyond the stage of protest and discussion. Between 1911 and 1917 (when the movement was temporarily checked by the war) a number of States instituted commissions of inquiry for the purpose of discovering more business-like methods in State administration. All of these commissions are substantially agreed that economy and responsible government can only result from:

1. The consolidation of offices, boards, and commissions into a few great departments of government, each of which is responsible for the conduct of a particular major function such as finance, health, welfare, or public works.
2. Vesting the power of appointment and removal of department heads in the governor; making him in fact, as well as in theory, the responsible chief executive of the State. There is a difference of opinion as to the desirability of confirmation of the governor's nominations by the senate.
3. A consolidated budget system with accounting control over spending officers.

Thirty-eight States have enacted legislation providing for a consolidated budget system with varying provisions as to methods of preparation, legislative review, and enactment into law. Half of these States have placed upon the governor the responsibility for initiating the budget.

¹ Summary of Report of Reconstruction Commission to Governor Alfred E. Smith on Retrenchment and Reorganization in the State Government, Oct. 10, 1919. Albany, N. Y., 1919. 44 pp.

The State government of New York, it is proposed, shall be re-organized with the following departments: Executive department; department of audit and control; department of taxation and finance; department of attorney general; department of state; department of public works; department of conservation; department of agriculture and markets; department of labor; department of education; department of health; departments of mental hygiene, charities, and correction; public service commissions; departments of banking and insurance; department of civil service; department of military and naval affairs.

Proposed Organization of a Department of Labor.

The commission proposes that a department of labor shall be organized as follows:

1. Place at the head of the department of labor an industrial commission consisting of five members appointed by the governor, with the advice and consent of the senate, for terms of five years.

2. The industrial commission will appoint a director of labor, who shall be the administrative head of the department and serve during good behavior.

3. The commission will also appoint a secretary, who will prepare the calendar for the commission, do the general administrative and secretarial work of the commission and serve as secretary to the industrial council.

4. The present counsel and his assistants will be transferred to the attorney general's office if the attorney general is made appointive.

5. The industrial council will be reorganized under a chairman who by specific provision may not be a member of the commission and will establish in the important industries of the State representative subcouncils of employers and employees for the discussion and action upon common problems of industry and for consultation by the commission and the industrial council. The 10 members of the council will be appointed by the governor for terms of five years, two terms ending each year. The chairman will continue to be chosen by vote of the members of the council and will hold office at the pleasure of the council.

6. The department will be organized with a staff and seven bureaus, as follows: Industrial staff; bureau of administration; bureau of employment; bureau of statistics and information; bureau of inspection; bureau of mediation and arbitration; bureau of workmen's compensation; bureau of the State insurance fund.

The head of the bureau of administration will be the secretary of the department.

The head of the industrial staff will be the chief of the industrial staff.

The head of the bureau of employment will be the chief of the bureau of employment.

The head of the bureau of statistics will be the chief statistician.

The head of the bureau of inspection will be the chief of the bureau of inspection.

The head of the bureau of mediation and arbitration will be the chief of the bureau of mediation and arbitration.

The head of the bureau of workmen's compensation will be the chief of the bureau of workmen's compensation. His deputies will be known as deputy commissioners of compensation.

The head of the bureau of the State insurance fund will be the manager of the State insurance fund.

The heads of all these bureaus will be in the competitive class under civil service excepting the secretary.

7. The duties of the present bureau of industries and immigration with reference to the education of aliens, will be transferred to the department of education. The other functions of the bureau will be transferred to the State and local health and police departments.

8. The present division of industrial hygiene in the bureau of inspection will be combined with the bureau of industrial code and the bureau of women in industry in a single industrial staff.

9. In connection with the development of the bureau of employment a bill will be passed providing that all private employment agencies in the State shall be licensed and shall pay a fee of \$250. The industrial commission will license everywhere in first and second class cities. Half the fees of such cities and all of the fees elsewhere will go to the State industrial commission for the support of the bureau of employment.

The bureau of employment will develop a program including the following subjects:

(1) The organization of the labor market to bring about extensive dovetailing of winter and summer trades and to stimulate the use of subsidiary trades.

(2) Directing labor to new occupations when changes of industrial structure result in displacement from chosen occupations.

(3) Reserving certain places in industry for older men and women and leaving the younger generation the task of finding and forcing fresh openings for themselves.

(4) Concentrating attention upon the need for industrial training, including "vestibule" or preliminary training, where such training does not lead to "blind-alley" employment, training in plants to increase efficiency while gainfully employed, and training in trade and business schools. This should be done with the State and local departments of education and with private educational institutions.

(5) Directing boys and girls away from "blind-alley" employment.

(6) Testing periodically and comprehensively the amount of unemployment. This should be done by the bureau of employment in cooperation with the bureau of statistics and information.

(7) In cases of seasonal employment or depression urging employers to shorten hours rather than discharge employees.

10. The bureau of statistics and information will cooperate with the bureau of employment in the issuance of employment statistics covering the largest possible number of employees and in the preparation of statistics on wages and the cost of living. The funds of the bureau of statistics for this and other purposes will be increased and statistical field agents will be provided.

11. The bureau of mediation and arbitration will take a larger part in settling industrial disputes. It will be organized under a chief who will have a panel of 20 representative citizens who will act as mediators and arbitrators when called upon, and such assistants as are required to make investigations and gather statistics.

12. The work of the bureau of workmen's compensation will be so arranged as to limit drastically the number of reviews by and appeals to the commission. A careful codification will be made of the decisions of this bureau. A medical social-service staff will be created in this bureau to follow up cases.

13. The State insurance fund will be placed in a bureau separate from the bureau of workmen's compensation and immediately under the director. An annual audit of the fund will be made by the superintendent of State insurance.

14. If a minimum wage or health insurance legislation is passed, the administration will be provided for in new bureaus under the director of labor and not in independent new departments.

15. The above recommendations will require only statutory changes.

STRIKES AND LOCKOUTS.

“Vacations” in the Printing Industry in New York City.

By A. J. PORTENAR.

THE recent trouble in the printing industry in New York City was a strike in the sense that a large number of workmen quit work at the same time for the accomplishment of a common purpose, yet it was never officially authorized nor officially acknowledged as a strike by either the local unions involved or by their internationals. There was, however, an essential difference in the respective attitudes of the locals and internationals, in that the locals in fact, though unofficially, supported the strike; while the internationals opposed it and eventually compelled the return of the men to work. Demands for an increase of \$14 per week and the establishment of the 44-hour week were the inciting causes of the outbreak, but before it was ended another issue had been injected—namely, the supremacy of international authority—and this latter issue finally became the more important of the two.

The workers in the printing industry are organized into five craft unions, each headed by an international, which is the parent body and issues its charters to subordinate unions located in various printing centers. These five are the International Typographical Union, which embraces all composing room employees; International Printing Pressmen and Assistants' Union; International Stereotypers and Electrotypers' Union; International Photo-Engravers' Union; International Brotherhood of Bookbinders.

These international unions, while each reserves complete autonomy within its craft, have been organized into an alliance known as the International Allied Printing Trades Association. The subordinate local unions are organized into the Allied Printing Trades Councils in their localities. The local unions are responsible to their respective internationals; the local councils are responsible to the International Printing Trades Association.

Among other purposes, the internationals allied in the association have mutually agreed that, in the event of a secession by locals of any one of them, they will support each other in suppressing the secession. The following excerpt from the agreement illuminates this point:

That when any union or members or group of members subordinate to any one of the five international unions making up the International Allied Printing Trades Association secede from the parent organization, the five international unions will join in a general movement against the seceders, and to the end that the supremacy and authority of the international organizations affected may be clearly and permanently established, the five international unions pledge their moral and financial support. In other words, and in a more concise form of expression, the five international unions of the printing trade, namely, the International Typographical Union, the International Printing Pressmen and Assistants' Union, the International Brotherhood of Bookbinders, the International Stereotypers and Electrotypers' Union and the International Photo-Engravers' Union, propose to stand firmly together in the protection of the jurisdiction rights of each one of the international organizations, and to that end pledge their united treasures to the success and permanency of the principles herein enunciated.

Early in 1919 most of the craft unions in the printing industry in New York City agreed to make a united demand for a flat increase of \$14 a week and the establishment of a 44-hour week, to become effective October 1, 1919. The unions not participating in this movement were Electrotypers' Union No. 100 and Stereotypers' Union No. 1, which for some time have had the 44-hour week, and Photo-Engravers' Union No. 1, which will get it on January 1, 1920. The following are the unions which entered into this agreement to present these uniform demands, and their minimum scales at that time were:

Typographical Union No. 6, \$36.

Printing Pressmen's Union No. 51, scales which varied from \$31 to \$46.

Franklin Union No. 23 (cylinder press feeders), \$30.

Job Press Feeders' Union No. 1, \$22.

Mailers' Union No. 6, \$28. (The mailers have local autonomy, but are subordinate to the International Typographical Union.)

Bookbinders' Unions Nos. 1, 6, 11, and 22, an average of \$36.

Bookbinders' Union No. 43 (female), \$18.50 to \$22.

Paper Cutters' Union No. 119, \$36. (Paper cutters are subordinate to the International Brotherhood of Bookbinders.)

Paper Rulers No. 9, \$36. (Paper rulers are subordinate to the International Brotherhood of Bookbinders.)

The officials of each of these unions, upon making this agreement to present uniform demands, stated that their contracts terminated not later than September 30, 1919. Therefore all of them were presumably in a position to enforce these demands without breach of contract.

Before this agreement had been made Pressmen's Union No. 51, Franklin Union No. 23, and Job Press Feeders' No. 1, all of them subordinate to the International Printing Pressmen's and Assistants' Union, had been drifting toward a break with the parent body. They charged that there had been misappropriation of funds by the international officers, and there was also much dissatisfaction with the law governing the referendum. These local unions, together with locals of the same craft in other cities, had previously started a proceeding for an accounting. The locals in New York City had declined to pay their per capita tax, depositing it with a trust company pending a decision of the lawsuit. Under the laws of the International Printing Pressmen and Assistants' Union any local which fails to pay per capita tax is automatically suspended at the end of three months. The International Printing Pressmen's Union naturally held that the deposit of the money elsewhere did not constitute payment, and notified the delinquent locals that the penalty of expulsion would be enforced when the three months' period had ended.

This condition was known to all the other locals in the industry, but at that time it did not seem to be regarded as an obstacle to the united action proposed. The demands were made known to the employers on April 14, and the pressmen's unions took part in all conferences without objection from anyone at that time.

Immediately after the presentation of these demands there was held in Chicago, on April 21, a meeting of what is known as the Joint International Conference Council, which is a newly created body composed of representatives from the employers' organizations on the one side and the five international presidents on the other. The employer delegates from New York brought to the attention of the conference the demands of the local New York unions. The outcome of this conference was a proposition that the 44-hour week be established throughout the industry on May 1, 1921, and that each of the representatives at the conference would go back to his organization and ask for the ratification of that agreement.

The convention of employers thereafter ratified the agreement. On May 28 a referendum vote was taken throughout the jurisdiction of the International Typographical Union on the question, Shall the 44-hour week become effective May 1, 1921? Typographical Union No. 6 of New York City voted "No" by a vote of 5,656 against and 618 for, but in spite of this heavily adverse vote, the proposition was carried throughout the country by a majority of 12,470. The pressmen's International Union also held a referendum vote which ratified the proposal by more than a two-thirds majority.

Regardless of these referendum votes, the local New York unions continued to press their demands for \$14 increase and a 44-hour week, effective October 1, 1919. All of the unions previously mentioned continued to act in concert, including the unions of pressmen, cylinder feeders, and job press feeders, which were now approaching the time when their expulsion would automatically ensue because of their refusal to pay per capita tax to their international. Some time in June a conference was held in the office of Typographical Union No. 6 between the international and local officials. Later conflicting reports were made to the membership explaining what had happened at that conference. President Marsden G. Scott, of the International Typographical Union, declared in a circular letter issued on September 25 that he had emphatically stated at that conference that Typographical Union No. 6 would not be permitted to press the demand for the 44-hour week in view of the action of the referendum. President Leon Rouse of Typographical Union No. 6 was equally emphatic in saying that Mr. Scott had refused to commit himself in any way at that time. The officials of Typographical Union No. 6 based their contention that they had a right to press for the 44-hour week on the authority of a resolution adopted by the Scranton convention (1917):

Whereas, The International Typographical Union was responsible for the eight-hour day in the printing industry; and

Whereas, the Saturday half-holiday in the book and job offices throughout the international jurisdiction has become an established feature, necessitating three-quarter hours overtime five days per week to make up for same; Therefore be it

Resolved, That it is the sense of the International Typographical Union that a week's work in the book and job trade should consist of 44 hours of eight hours the first five days and four hours on Saturday; and, be it further

Resolved, That subordinate unions be instructed to negotiate scales in the book and job offices under above provisions whenever practical.

The international officers held that the referendum vote fixing May 1, 1921, as the time for establishing the 44-hour week was binding on all the membership.

On July 1 the situation became complicated by the expulsion of Franklin Union, No. 23 (cylinder feeders), for nonpayment of per capita tax.

On August 2 Pressmen's Union No. 51 and Job Press Feeders No. 1 were also expelled for the same reason. Nevertheless these unions continued to take part in conferences held with the local association of employers until some time in September. At that time the employers' conference committee gave notice that they would no longer confer with any organization not affiliated with its international and with the American Federation of Labor. The so-called "outlaw"

unions then withdrew, with the understanding that their interests would be cared for by President Rouse, of Typographical Union No. 6.

Conferences continued through August and September without any definite result until early in September. Bookbinders' Unions Nos. 1, 6, and 43; Paper Cutters No. 119; Paper Rulers No. 9; and Mailers No. 6 declared at a conference between the employers and the unions that they were mistaken in their previous statements to the effect that they had no contracts outstanding beyond September 30; that in fact they had arbitration agreements which extended beyond that date. Therefore they would accept the increase of \$6 which had previously been offered by the employers and would agree to the postponement of the 44-hour week until May 1, 1921. They qualified this, however, by saying that if better terms were obtained by any other union, then such terms were automatically to be extended to them.

As soon as the three pressroom unions had been declared "outlawed" by their international the formation of new Nos. 51, 23, and 1 was begun. A small minority of the membership of those unions had remained loyal to the international, and these formed the nucleus for the new organizations. For a considerable time there were few accretions to these new unions.

On September 5 there were two pressmen working in the pressroom of the Publishers' Printing Co. who carried cards in the new No. 51. The remainder of the pressroom force were members of the outlawed unions. The officers of the old union demanded that these two men be discharged. The demand was refused and nearly the whole force, with the exception of these two men, quit work immediately.

On September 30 there was posted in the pressrooms of all the members of the Printers League and the Typothetae (closed shop division) the following notice: "On and after October first, only pressmen and feeder members of the international will be employed in this office."

The posting of this notice meant a lockout in the pressrooms of the organized commercial job shops of New York City, for practically their entire working forces were members of the unions which had seceded from their international, the act of secession being the refusal to pay per capita tax, with their consequent expulsion. The morning of October 1 therefore found the pressrooms deserted, but the composing-room forces working. All the other unions had either not been involved originally or had withdrawn from the controversy as above stated.

There can be no question that the sympathies of both the officers and the rank and file of Typographical Union No. 6 were with the "outlawed" unions. These men had in many cases been working together for years. In addition, they were still animated by the common purpose to secure the 44-hour week immediately. The officers of No. 6 declared that they would do nothing which would imperil their regular standing inside of their international, but at the same time showed no inclination to modify their demands in any particular, but no order to quit work on October 1 in support of these demands was officially given, and there is no evidence to show that such an order was unofficially promulgated.

On the morning of October 1, 139 men working in the composing room of the Technical Press were laid off without notice, on the ground that there was no work for them. On the same morning three men were laid off in the Carey Press on the same ground, but the members of the union working in that shop declared that those laid off had all been prominent in agitating for the wage increase and shorter work week. Be that as it may, this body of about 150 men immediately divided itself into committees of three or four to notify the members working in all the other shops of what had happened and to ask them to quit work. This they could not do as strikers, for none of the procedures laid down by law previous to the declaration of a strike had been complied with. Meetings were held in the various shops, with the result that individual "vacations" immediately became extremely popular. Before night 1,000 men had gone on vacation, and before the week had ended the number was about 3,800. Thus, on October 6 there were on the street about 2,500 members of Pressmen's Union No. 51, 2,500 members of Franklin No. 23 (feeders), and about 500 members of Job Press Feeders No. 1. These had all been locked out by the employers. Also, there were approximately 3,800 members of Typographical Union No. 6 "on vacation."

A meeting of Typographical Union No. 6 was held on October 5, at which the executive committee recommended the passage of a resolution ordering the vacationists back to work. The president told them the resolution must be passed, so that no charge of violating international law relating to strikes could be made against the unions. The resolution was adopted, but it was plain that neither officers nor members had the slightest intention of living up to it. An unofficial organization was formed among the "vacationists," called the 44-50 Club, which in a measure performed the usual duties of a strike committee.

Throughout October conferences were held with the employers which were utterly barren of result. The employers renewed their offer of a \$6 advance and expressed a willingness to arbitrate the whole question. Typographical Union No. 6 refused both of these offers. The pressroom unions could not enter the conferences, because the employers refused to recognize them. The unions held frequent meetings which were very largely attended, but which resulted only in the adoption of dilatory motions expressing confidence in the officers and directing them to seek further conferences with the employers. So the whole month of October passed without any particular change in the situation, both parties refusing to recede in the slightest degree from the positions they had taken.

During that month the question of support for the men on the street became extremely urgent. The pressroom unions expended all the funds they had for the maintenance of their members. Typographical Union No. 6 could not legally levy an assessment for strike purposes. They overcame the difficulty by sending to the referendum a proposition for a 10 per cent assessment for the benefit of the "unemployed." This proposition could hardly fail of adoption, because the "unemployed" made up an actual majority of the membership. It was carried with slight opposition. The proceeds of this assessment, however, were entirely insufficient to pay the benefit of \$12 a week which had been voted, and which was increased to \$15 the following week, and the special funds of the union had to be depleted to support the "vacationists."

One of the most irritating features of the whole difficulty was that the international officers came to New York, conferred with the employers, issued newspaper statements condemning the "vacations," but did not confer with the officers of the local union nor appear at any of the frequent meetings which were held. This attitude of the international officers created such an intense feeling of resentment that it was an important factor in keeping up the determination of the rank and file to stay out. On November 2 all the officers of the international executive council except the president appeared before Typographical Union No. 6 and urged the men to return to work. Their mission was fruitless.

The issue of wages and hours had by this time become subordinate. The international officers frankly confessed that their object in coming to New York was to beat down secession. The employers knew that even if they could get their compositors back, they would nevertheless be unable to go very far unless they could man their pressrooms; but they believed that if the support of Typographical Union No. 6 was withdrawn from the seceding unions the latter would collapse. As

a matter of fact, the members of the seceding unions were making application in the new pressroom unions in continually increasing numbers throughout October and early November, and that movement would have been greatly accelerated had it not been for the determined attitude of the "vacationists" in Typographical Union No. 6.

The compositors and pressmen on the street knew that the financial resources of their respective organizations were getting very low, but they held out in the belief that the employers also were being subjected to terrific financial strain, and that they might crack first. Everybody knew that a great deal of work was leaving the city, some of it on temporary contracts and some permanently diverted. Employing printers in other cities, notably Cincinnati, made strenuous efforts to grab New York work. The unions were encouraged in their expectations by the fact that a number of employers did actually enter into agreements with them to pay a \$6 advance, work 44 hours, hire members of the outlawed unions, and make a final adjustment of wages and hours whenever an agreement had been reached with the employers' association; but when the attempt was made to carry out these agreements, all the other unions represented in the Allied Printing Trades Council, with the exception of Typographical Union No. 6, refused to work with the seceding pressmen, and refused to do any work for any shop that employed them. Such shops could not get any plates or photo-engravings, could not get any bindery workers or send their work to an outside bindery, or have anything done outside of their composing rooms or pressrooms. Some employers carried out the agreement in spite of this handicap, but most of them who were willing to make such agreements declined to settle trouble in one department if by consequences they invited trouble in another. The situation was that the pressroom unions were being discriminated against more severely than nonunion men by all the unions except Typographical Union No. 6, and No. 6 itself was drifting into a position where it might also become an outlawed union.

On October 29 the employers' conference committee sent a letter to President Rouse of Typographical Union No. 6 renewing the offer of an immediate advance of \$6, all other matters to be submitted to arbitration, an answer to be given not later than November 3, and refusing any further conferences. The purpose of this communication was to compel No. 6 either to accept the arbitration offered or definitely refuse it.

A resolution passed by the Scranton convention of the International Typographical Union (1917) reads:

We recommend that the executive council be instructed to suspend the charter of any union which violates its contract or which refuses fair arbitration in any dispute which may arise under that contract or in the negotiation of a new agreement.

Acceptance would naturally mean the end of the difficulty; refusal would give the international executive council the legal right to intervene.

At a meeting on November 9 Typographical Union No. 6 by a vote of 2,500 to 17 refused arbitration. Shortly thereafter the executive council came to New York and the following letter was sent to Typographical Union No. 6:

NEW YORK, November 22, 1919.

Mr. LEON ROUSE, *President,*

New York Typographical Union No. 6,

DEAR SIR: The executive council of the International Typographical Union has reached the conclusion that the present situation in the printing industry in the jurisdiction of New York Typographical Union No. 6 has reached the point where attempts will be made to inaugurate open-shop or nonunion conditions in some commercial office composing rooms that have previously been union unless some remedy is immediately applied.

The council further says that the position of New York Typographical Union No. 6 in refusing to arbitrate the question of the time the 44-hour week shall go into effect in these offices is contrary to the declared policies of the International Typographical Union, and is a menace to other subordinate unions.

In view of these facts and for the purpose of protecting the interests of New York Typographical Union No. 6, and the International Typographical Union, the executive council directs that New York Typographical Union No. 6 at its meeting to-morrow, November 23, order its members who are taking so-called vacations to return to work in all offices on Monday, November 24, 1919, and that it instruct its officers to accept arbitration as a method of settling any disputes at present in controversy. It then expects that the members will return to work in compliance with the order of the union.

In case New York Typographical Union No. 6 at its meeting on Sunday, November 23, 1919, fails to comply with this order of the executive council, that body will be compelled to take action authorized by section 2, Article X, of the International Typographical Union constitution, which reads as follows:

SECTION 2. Any subordinate union which shall fail to make reports required by law or the executive council, or which shall neglect or refuse to obey any law or legal mandate of the International Typographical Union, or executive council, may be fined or have its charter suspended by the executive council.

At a meeting held on November 23, following the receipt of this letter, the executive committee of the local typographical union recommended the adoption of a resolution in line with the mandate of the international union. Some of the members advocated the repetition of a previous performance—namely, to pass the resolution to return to work, but not to comply with it. After a bitter debate, the resolution was adopted by a divided vote.

The men returned to their work the next morning and the eight weeks "vacation" in the book and job shops of the printing industry of New York City was ended. The pressmen had preceded the compositors back to work in most shops, the certain defeat of their secession movement being plain to them. They accepted the amnesty of-

ferred by their international union, which required only that they surrender their cards in the old unions and take out cards in the new ones, even giving them credit for all dues paid to the outlawed unions.

After the men had returned to work, negotiations for the selection of an arbitrator were begun, and all the issues concerning wages and hours will be submitted to him. The 44-hour week will almost certainly be postponed until May, 1921, but some further increase of wages will probably be added to the flat \$6 already obtained.

Two significant facts have been brought out during the trouble. One is that there exists a considerable group who are ready to renounce their international allegiance upon slight provocation. This fact foreshadows the inevitable struggle for control between the radical and conservative elements throughout the whole body of organized labor. The second is that compulsory arbitration, which is bitterly opposed whenever embodied in proposed legislation, was in this instance imposed by an international union on one of its locals.

Berlin Metal Workers' Strike.¹

THE strike of Berlin metal workers began on September 17, 1919, and by September 30 it was affecting nearly four-fifths of the persons employed in the Berlin metal-working industry, the total on strike being about 100,000. It arose out of the award of August 21 made by the conciliation board appointed to settle a previous strike. This award divided the workers into five wage groups. The rates were to be fixed by a joint commission. The commission failed to come to an agreement, and the workers' representatives who broke off negotiations sent an ultimatum on September 16 to the heads of eight firms threatening to strike if their demands were not granted within 24 hours.

The commission had made 19 partial awards, which failed to satisfy the workers, who thought that the awards meant reduced wages and assignment to lower wage groups. The chairman of the new conciliation board, formed after the break-off of negotiations, published on September 16 a reply to the men's complaints, in which he states:

The award on August 21 provided five classes of wages, payable on first engagement. In addition three service bonuses were to be paid after certain fixed periods of employment. These bonuses were to apply to individual workers in each branch who showed special ability and industry or were em-

¹ From various issues of *Vorwärts*. Berlin, September 13 to October 13, 1919.

played on work dangerous to health, and not, as the Metal Workers' Union asserts, to whole (occupational) groups of workers.

As five classes were to be fixed, it was clearly the task of the commission to place the most highly qualified workers in the first class, the least qualified in the fifth class, and the rest in the three intermediate classes.

The minimum wages so far accorded in the partial awards are almost without exception higher, and in no case lower, than existing minimum wages.

A different account of the dispute, which throws the blame on the employers, was given by a representative of the commission at a general meeting of the Berlin Metal Workers' Union on September 22. He said:

"After four meetings, resulting in 19 partial awards, negotiations were broken off. The employers strongly opposed the commission's ruling that workers who perform severe work dangerous to health should be included in the first category, and refused to give way on this point."

The strike began in small departments of a few firms and spread rapidly. The strikers were vital to the industries, so that lockout measures became necessary. From 500 the number of strikers had risen by September 22 to 5,000; and three days later to 18,000. On September 26 the large Siemens works had to be closed, as the firemen had struck, and 60,000 workers were out of employment. By September 30 the number of firms affected was 125; there were 31,300 men on strike and 72,300 were locked out. Seldom has a strike begun so vaguely as this one. Hitherto definite demands have formed the basis of every dispute. The latest dispute has arisen because it was assumed the employers were trying to bring about a reduction in wages.

The commission of 15, appointed by the Metal Workers' Union to formulate the workers' demands, drafted an agreement which was presented to the employers during the first week in October. By October 9, 40 firms had signed the agreement and work had been resumed, and a week later this number had been doubled. Meanwhile the strike continued to spread in concerns the owners of which refused to come to an agreement. At some works the strikers were replaced by voluntary workers organized as an emergency corps (*technische Nothilfe*); and as a protest the commission of 15, on October 17, ordered a general strike of electrical workers. On the same day, however, a proposal was put forward by the minister of labor and accepted by the employers' association and the Metal Workers' Union. The electrical workers agreed to resume work the same evening. The proposal is as follows:

1. Negotiations for the division of workers into five wage classes are to be undertaken, and worked out in sections before the chairman of the arbitration

court. If an agreement be reached it shall be binding on both parties. If no settlement be reached, the court of arbitration shall give a final decision.

2. The court of arbitration shall consist of 4 neutral members with 3 employers and 3 workers as assessors.

3. The neutral members shall be appointed, after consultation with both parties, by the minister of labor.

4. The award of August 21 shall remain valid. In the fifth wage class the increases shall be raised by sums ranging from 5 to 10 pfennigs, in accordance with the concession already made.

IMMIGRATION.

Immigration in October, 1919.

THE following tables, prepared by the Bureau of Immigration of the Department of Labor, show the total number of immigrant aliens admitted into the United States in each month from January, 1913, to October, 1919, and the numbers admitted in each fiscal year, 1915 to 1919, and in October, 1919, by nationality. The total departures of emigrant aliens in October, 1919, numbered 25,447.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS
JANUARY, 1913, TO OCTOBER, 1919.

Month.	1913	1914	1915	1916	1917	1918	1919	
							Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	24,745	6,356	9,852	18.3
February.....	59,156	46,873	13,873	24,710	19,238	7,888	10,586	7.5
March.....	96,958	92,621	19,263	27,586	15,512	6,510	14,105	33.2
April.....	136,371	119,885	24,532	30,560	20,523	9,541	16,860	19.5
May.....	137,262	107,796	26,069	31,021	10,487	15,217	15,093	10.5
June.....	176,261	71,728	22,598	30,764	11,095	14,247	17,987	19.2
July.....	138,244	60,377	21,504	25,035	9,367	7,780	18,152	.9
August.....	126,180	37,706	21,949	29,975	10,047	7,862	20,597	13.5
September.....	136,247	29,143	24,513	36,398	9,228	9,997	26,584	29.1
October.....	134,440	30,416	25,450	37,056	9,284	11,771	32,418	21.9
November.....	104,671	26,298	24,545	34,437	6,446	8,499		
December.....	95,387	20,944	18,901	30,902	6,987	10,748		

¹ Decrease.

Classified by nationality, the number of immigrant aliens admitted into the United States during specified periods and in October, 1919, was as follows:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN OCTOBER, 1919, BY NATIONALITY.

Nationality.	Year ending June 30—					October, 1919.
	1915	1916	1917	1918	1919	
African (black).....	5,660	4,576	7,971	5,706	5,823	845
Armenian.....	932	964	1,221	321	282	112
Bohemian and Moravian.....	1,651	642	327	74	105	56
Bulgarian, Serbian, Montenegrin.....	3,506	3,146	1,134	150	205	102
Chinese.....	2,469	2,239	1,843	1,576	1,697	170
Croatian and Slovenian.....	1,912	791	305	33	23	27
Cuban.....	3,402	3,442	3,428	1,179	1,169	194
Dalmatian, Bosnian, Herzegovinian.....	305	114	94	15	4	8
Dutch and Flemish.....	6,675	6,433	5,393	2,200	2,735	896
East Indian.....	82	80	69	61	68	26
English.....	38,662	36,168	32,246	12,980	26,889	5,217
Finnish.....	3,472	5,649	5,900	1,867	963	119
French.....	12,636	19,518	24,405	6,840	12,598	2,779
German.....	20,729	11,555	9,682	1,992	1,837	620
Greek.....	15,187	26,792	25,919	2,002	813	475
Hebrew.....	26,497	15,108	17,342	3,672	3,055	713
Irish.....	23,503	20,636	17,462	4,657	7,910	1,227
Italian (north).....	10,660	4,905	3,796	1,074	1,236	1,067
Italian (south).....	46,557	33,909	35,154	5,234	2,137	5,103
Japanese.....	8,609	8,711	8,925	10,168	10,050	914
Korean.....	146	154	194	149	77	3
Lithuanian.....	2,638	599	479	135	160	30
Magyar.....	3,604	981	434	32	52	9
Mexican.....	10,993	17,198	16,438	17,602	28,844	4,095
Pacific Islander.....	6	5	10	17	6	1
Polish.....	9,065	4,502	3,109	668	732	168
Portuguese.....	4,376	12,208	10,194	2,319	1,574	701
Romanian.....	1,200	953	522	155	89	69
Russian.....	4,459	4,858	3,711	1,513	1,532	194
Ruthenian (Russniak).....	2,933	1,365	1,211	49	193	5
Scandinavian.....	24,263	19,172	19,596	8,741	8,261	2,367
Scotch.....	14,310	13,515	13,350	5,204	10,364	1,740
Slovak.....	2,069	577	244	35	85	197
Spanish.....	5,705	9,259	15,019	7,909	4,224	1,251
Spanish-American.....	1,667	1,881	2,587	2,231	3,032	431
Syrian.....	1,767	676	976	210	231	82
Turkish.....	273	216	454	24	18	2
Welsh.....	1,390	983	793	278	608	148
West Indian (except Cuban).....	823	948	1,360	732	1,223	196
Other peoples.....	1,877	3,388	2,097	314	247	59
Total.....	326,709	298,826	295,403	110,618	141,132	32,418

PUBLICATIONS RELATING TO LABOR.

Official—United States.

CALIFORNIA.—*Industrial accident commission. Tunnel safety rules, effective December 1, 1919. Sacramento, 1919. 139 pp.*

— *Laws, statutes, etc. Labor laws of California. Prepared by the California State Library. Sacramento, 1919. 261 pp.*

DISTRICT OF COLUMBIA.—*Minimum Wage Board. Wages of women in hotels and restaurants in the District of Columbia. Washington, October 10, 1919. 23 pp. Bulletin No. 3.*

This report is summarized on pages 144 to 148 of this issue of the MONTHLY LABOR REVIEW.

IDAHO.—*Industrial accident board. First annual report from January 1, 1918, to October 31, 1918. Boise, 1918. 24 pp.*

A summary of this report appears on pp. 247 and 248 of this issue of the MONTHLY LABOR REVIEW.

MARYLAND.—*State industrial accident commission. Fourth annual report for the year November 1, 1917, to October 31, 1918, inclusive. Baltimore, 1919. 40 pp.*

This report is summarized on pp. 248 and 249 of this issue of the MONTHLY LABOR REVIEW.

MASSACHUSETTS.—*Bureau of Statistics. Forty-sixth quarterly report on employment in Massachusetts, quarter ending June 30, 1919. Boston, 1919. 20 pp.*

Reports increased activity in all important industries and trades, particularly in the building trades, boot and shoe and textile industries, and in iron and steel manufacturing, and an increase in the demand for labor. The total number of strikes recorded during the quarter was 161, compared with 65 during the preceding quarter. Returns received from 1,129 labor organizations in Massachusetts, representing an aggregate membership of 249,737, give the number of members unemployed for all causes at the close of June, 1919, as 12,637, or 5.1 per cent of the total number, in contrast with 13.4 per cent unemployed at the close of March, 1919.

— *State Board of Conciliation and Arbitration. Annual report for the year ending December 31, 1918. Boston, 1919. 98 pp. Public document No. 40.*

"The chief labor troubles were 163, in which one or both parties were unwilling to abandon hostile action." In such disputes, summarized as cases of mediation, the board sought the parties and proffered its advice, suggestions, and assistance. The board's services were sought in 222 petitions, including 59 for determining as normal the conditions of business concerns having a history of labor troubles, and 163 joint applications for arbitration. Ten of the latter were filed in 1917; three of recent origin are pending. In 39 cases a mutual settlement was effected, 2 applications were withdrawn, the contention having been abandoned, and the remaining 119 resulted in awards covered in the report.

MICHIGAN.—*Department of Labor. Thirty-sixth annual report. 1918. Lansing, 1919. 766 pp.*

Contains reports on inspection of factories, workshops, stores, hotels, restaurants, coal mines, and boats, on Michigan free employment bureaus and private employment agencies, prison and reformatory statistics, and labor laws. In 1918, 15,592 factories and workshops were inspected, as compared with 14,262 for the previous year. The number of women employed in the industries of the State during 1918 was 95,349, an increase of 19,337, or 25.4 per cent, when compared with 1917. The number of children employed was 1,651, being an increase of only 26 over the number for 1917. During the year 51,110 accidents were reported, this being 6,962 less than the number reported for 1917. For the fiscal year ending November, 1918, the work of Michigan free employment bureaus shows an increase of 8,010 placements over the previous year, the totals being respectively 108,463 for 1917, and 116,473 for 1918.

MINNESOTA.—*Department of Labor and Industries. Court decisions, Attorney General's opinions, Department of Labor advice, relative to the Workmen's Compensation Act. St. Paul, September, 1919. 84 pp. Bulletin No. 16.*

MONTANA.—*Industrial Accident Board. Fourth annual report for the 12 months ending June 30, 1919. Helena, 1919. 437 pp.*

A brief digest of this report appears on pages 249 to 251 of this issue of the MONTHLY LABOR REVIEW.

NEW MEXICO.—*State Mine Inspector. Seventh annual report for the year ending October 31, 1918. Albuquerque, 1918. 101 pp.*

The output of coal for the year was 4,037,726 short tons valued at \$9,876,361; the production of coke 607,241 tons valued at \$2,448,494.57. No labor disturbance was reported and the relations between employer and employees are stated to have been amicable. Employment at the mines was as follows: Miners, 3,070; day men in mines, 837; boys in mines, 45; day men on top, 876; boys on top, 45; total employed, 4,837; men employed at coke ovens, 315.

NEW YORK.—*Reconstruction Commission. Summary of report to Governor Alfred E. Smith on Retrenchment and reorganization in the State government. October 10, 1919. Albany, 1919. 44 pp. Charts.*

A digest of the proposed reorganization of the New York department of labor appears on pages 266 to 269 of this number of the MONTHLY LABOR REVIEW.

— *University. State-aided evening vocational schools. Albany, June 15, 1919. 37 pp. Bulletin No. 688.*

The purpose is to define the kinds of evening vocational schools entitled to special aid under the provisions of section 605, article 22 of the education law, as amended by chapter 531, Acts of 1919, to describe the plans of organization and administration which experience seems to show are the most satisfactory, and to indicate to communities the proper procedure required to enable them to secure State aid. The text of the law, effective Aug. 1, 1912, is included.

OHIO. *Department of Health. Health of Ohio coal miners. Abstract of a report by Emery R. Hayhurst. Columbus, 1919. 24 pp. Reprint 1903 (from Ohio Public Health Journal, Feb.-May, incl., 1919).*

Portions of the material used in this report, particularly those relating to mortality, how miners cope with sickness and death hazards, community medical facilities, and general conclusions, appeared in an article by Dr. Hayhurst on Protecting the health of soft-coal miners by prevention of disease, in *Modern Medicine*, July, 1919, and was summarized in the September, 1919, issue of the MONTHLY LABOR REVIEW, pages 291-294. The report also considers working conditions, health hazards by chief occupations, housing conditions and local health administration, and sickness—types and extent.

OREGON. *State Industrial Accident Funds. Report on examination and audit, as of June 30, 1919. Salem, 1919. 4 pp.*

PHILIPPINE ISLANDS. Bureau of Labor. *Labor. Boletín trimestral. Vol. 1, No. 1. Manila, March, 1919. 111 pp.*

The first issue of a quarterly publication of the Bureau of Labor. The chief aim is stated to be "to offer the laborers of these islands a source of general information relative to labor." The publication will also contain articles relative to interisland migration of laborers, of which the bureau has charge and for which the Philippine Legislature has this year appropriated the sum of 350,000 pesos (\$175,000), and other data referring to matters of interest to laborers. This issue contains tables showing the daily wages paid to laborers and carpenters employed by the provincial government in the construction of roads, bridges, and provincial buildings; wages of laborers in agriculture, industry, and commerce during the years 1911 and 1917, statement on strikes in 1919, and other data, part of which is in English. The agricultural laborer received in 1911 an average daily wage of about 0.64 pesos (\$0.32), in a majority of cases including food and in a few, both food and lodging, and in 1917 an average daily wage of about 0.668 pesos (\$0.334), which represented an increase of 0.028 pesos (\$0.014) daily or 4.38 per cent in the six years; while the industrial and commercial Filipino laborer in 1911 earned an average daily wage of about 0.88 pesos (\$0.44), and in 1917 and a great part of 1918, 1.28 pesos (\$0.64), which means an increase of 0.40 pesos (\$0.20) or 45.45 per cent.

WISCONSIN. *State Board of Vocational Education. Courses of study. Electricity: Shop, drawing, mathematics, safety, equipment, references. Madison, 1919. 16 pp. Monograph No. 2.*

— — — *Sheet metal: Shop, drawing, mathematics, science, safety, equipment, references. Madison, 1919. 11 pp. Monograph No. 4.*

UNITED STATES. *Civil Service Commission. Civil-service act, rules, statutes, and executive orders. Revision of the rules of April 15, 1903, with notes on the rules by the commission and legal decisions, amended to July 1, 1919. Washington, 1919. 110 pp.*

— Congress. *Joint Committees on Labor. National employment system. Hearings on S. 688, A bill to provide for a national employment system; S. 1442, H. R. 4305, bills to provide for the establishment of a national employment system and for cooperation with the States in the promotion of such system, and to regulate the expenditure of moneys that shall be appropriated for such purposes. Parts 1 and 2. Washington, 1919. Pp. 1-277, 281-715. 66th Congress, 1st session.*

— Department of Commerce. Bureau of the Census. *Mortality statistics, 1917. Eighteenth annual report. Washington, 1919. 597 pp.*

— Department of the Interior. Bureau of Education. *The Federal executive departments as sources of information for libraries, compiled by Edith Guerrier. Washington, September 1, 1919. 204 pp. Bulletin No. 74.*

The author has outlined briefly the functions of the various departments of the Federal Government and characterized the features of the publications of each department of special interest to librarians. The general subjects treated in the publications of the Department of Labor are listed and grouped by bureaus. The recent bulletins and other publications of the United States Bureau of Labor Statistics are listed in full, and matters pertaining to labor bibliographies and indexes are given special mention.

— — — Bureau of mines. *Abstracts of current decisions on mines and mining reported from January to May, 1919. Washington, 1919. 175 pp. Bulletin 181. Law serial 19.*

Includes decisions relating to damages for injuries to miners.

UNITED STATES. *Department of Labor. Bureau of Naturalization. Naturalization laws and regulations. Washington, October 10, 1919. 39 pp.*

Includes the provision of the act of July 19, 1919, relating to naturalization.

— *Children's Bureau. Laws relating to "mothers' pensions" in the United States, Canada, Denmark, and New Zealand. Washington, 1919. 316 pp. Legal series No. 4, Bureau publication No. 63.*

A digest of this volume was published in the December, 1919, issue of the MONTHLY LABOR REVIEW, pages 347 and 348.

— *Maternity benefit systems in certain foreign countries, by Henry J. Harris. Washington, 1919. 206 pp. Legal series No. 3. Bureau publication No. 57.*

"Sources of information" are listed at the end of the sections dealing with the various countries (except France and Luxemburg) included in the report, and a bibliography arranged by country is found on pages 195-206.

— *Information and Education Service. Division of public works and construction development. Economics of the construction industry. Washington, 1919. 263 pp. Charts.*

Report of an investigation "of those general economic factors which, taken together, determine the financial success or failure of a prospective investment in improved real estate and which, consequently, investors are in the habit of considering before undertaking the improvement of real estate." The division was organized to "stimulate the interest of the Nation in public and private construction" with a view to the creation of buffer employment for labor during the period of transition of manufacturing interests from war to peace production. As to the stimulation of private construction, it was decided that this should take the form of supplying authentic data to assist the individual investor to judge for himself whether or not it would be profitable for him to build. "The provision of such data meant an investigation of the volume of deferred construction, of the recent course of construction-material prices, of wages in the construction industry, of land values and rents, and of mortgage-loan conditions." The more important findings of the investigation concern the following matters: Deferred construction, recent construction, prices of construction materials, wages in the construction industry, cost of construction, land values and rents, and mortgage loans.

— *Training Service. Courses of instruction for workers in cotton mills, including directions for installing a training department and a summary of information which every worker in a cotton mill should possess. Washington, 1919. 64 pp. Training bulletin No. 25.*

— *Courses of instruction in piano making; together with a section on player pianos, pneumatic actions, piano actions, and keys. Washington, 1919. 67 pp. Training bulletin No. 22.*

— *Industrial training in the overalls industry. The organization and conduct of training in the industrial establishments for operators and cutters. Washington, 1919. 57 pp. Training bulletin No. 18.*

— *Training for shirt workers. A plan for organizing and conducting training for workers in the industry. Washington, 1919. 59 pp. Training bulletin No. 19.*

— *Training in industrial plants. A manual for American industries setting for the theory and practice of industrial training. Washington, 1919. 30 pp. Training bulletin No. 14.*

— *Training in the men's suit and overcoat industry. An outline of the organization and conduct of training for cutters, pressers, machine operators, and hand severs in the industry. Washington, 1919. 83 pp. Training bulletin No. 16.*

— *Training in the paper-box industry. Washington, 1919. 75 pp. Training bulletin No. 15.*

UNITED STATES. Department of Labor. Training Service. *Training in the shoe industry.* Washington, 1919. Illustrated. Training bulletin No. 21.

——— *Training workers in the women's cloak, suit, and skirt industry. A plan for the organization and conduct of training for cutters, pressers, machine operators, and hand sewers in the industrial establishments.* Washington, 1919. 85 pp. Training bulletin No. 17.

——— Women's Bureau. *The eight-hour day in Federal and State legislation. A brief summary of the various "eight-hour laws" in effect in the United States: 1919.* Washington, October 15, 1919. 19 pp. Bulletin No. 5.

——— *The employment of women in hazardous industries in the United States. A brief résumé of State and Federal laws regulating the employment of women in hazardous occupations: 1919.* Washington, 1919. 8 pp. Bulletin No. 6.

——— *Night-work laws in the United States. Brief summary of State legislation regulating night work for women.* Washington, October 15, 1919. 5 pp. Bulletin No. 7.

——— Interstate Commerce Commission. Division of Statistics. *Thirtieth annual report on the statistics of railways in the United States for the year ended December 31, 1916.* Washington, 1919. 959 pp.

——— Treasury Department. Commissioner of Internal Revenue. *Annual report for the fiscal year ended June 30, 1919.* Washington, 1919. 244 pp. Document No. 2844.

Contains a section relating to the tax on the employment of child labor.

——— Public Health Service. *Health insurance, the medical profession, and public health. Including the results of a study of sickness expectancy.* By B. S. Warren and Edgar Sydenstricker. Washington, 1919. 16 pp. Reprint No. 516 from the Public Health Reports, April 18, 1919, pages 775-789.

The principal points which suggest themselves for the consideration of health insurance, both from the viewpoint of the physician and of the public health official, according to the authors, are: The sickness expectancy, i. e., the amount of sickness for which medical and surgical service must be provided; Methods of providing adequate medical and surgical relief; and Methods of adequate prevention of sickness. These points are considered in detail, and a scheme of organization outlined which has been suggested as following the general outlines of a plan for coordination approved by the Annual Conference of State and Territorial Health Officers with the Public Health Service, May, 1916. The proposed organization is stated to be about as follows:

1. Make the State commissioner of health an ex officio member of the State health insurance commission.

2. Detail a medical director from the State health department to assist the commission in supervising the administration of the medical benefits and to act as health advisor and director.

3. Detail district medical directors from the State health department to aid in the administration of the medical benefits in their respective districts.

4. Detail from the State health department a sufficient number of local medical officers to act as medical referees and to sign all disability certificates, and to perform such other duties as may be authorized by law or regulation.

Official—Foreign Countries.

AUSTRALIA. *Court of conciliation and arbitration. Commonwealth arbitration reports.* Vol. 12. *A report of cases decided and awards. Including conferences convened by the President or Deputy President during the year 1918.* Melbourne. [1919.] 983 pp.

— (NEW SOUTH WALES). *Board of Trade [Declaration of 8th October, 1919, as to the living wage to be paid to adult male employees, etc.]* Sydney, 1919. 10 pp. Price, 6d. Published in Government Gazette No. 237 of 10th October, 1919.

This cost of living study was made by the New South Wales Board of Trade in order to determine the living wage to be paid to adult male employees in that State. In making the study the Board of Trade followed the principles laid down in a previous study which were: That the determination of the average cost of living should be based upon the average requirements of the lowest paid class of workers; that this in turn should be based upon the average sized family of this class; and that the standard should be sufficiently high to meet the requirements for a normal mode of living.

As a result of the study the Board determined that the average cost of living had increased to £3 17s.¹ per week and accordingly this was fixed as the living wage for adult employees which should be paid in the area studied. The amounts apportioned to different items were as follows:

	£.	s.	d.
Food and groceries-----	1	11	4
Rent-----	--	15	7
Fuel and light-----	--	3	0
Clothing and boots-----	--	14	0
Other items-----	--	13	1
	8	17	0

— — — *Second interim report on the prevalence of miners' phthisis and pneumoconiosis in certain industries. Report upon the constitution and cost of a technical commission of inquiry into miners' phthisis and other diseases affecting miners.* Sydney, 1919. 57 pp.

The first interim report, which was noted in the June, 1919, issue of the MONTHLY LABOR REVIEW, page 358, contained recommendations for the appointment of a technical commission of inquiry for the purpose of conducting an investigation into the prevalence of pneumoconiosis among miners, and pointed out the fact that such an inquiry conducted by independent medical and scientific specialists was alone likely to provide the data upon which a sound judgment upon the matter of the report could be based. The present report contains complete proposals, including an estimate of cost, for the formation of such a commission, which should consist of at least four eminent scientists, besides a radiologist, a zoologist, a physicist, and an efficient corps of assistants.

— — — *Department of Labor and Industry. Industrial Gazette. Special supplement.* Vol. 16, No. 2. August, 1919. *Industrial conditions in Great Britain and the United States of America. Report of investigations by the Hon. G. S. Beeby.* Sydney, 1919. 187 pp. Price 1s.

Some of the subjects dealt with in this study are Factors of unrest; Present problem in Great Britain and the United States of America (including Individualism v. State control in U. S. A. and The Whitley plan in Great Britain);

¹ Conversions are not made owing to fluctuating value of the pound. Normally the par value of the English pound is \$4.87.

Collective bargaining; Industrial welfare; Industrial hazards, including workmen's compensation and social and unemployment insurance; Methods of production; Profit-sharing; Child and female labor; and Industrial research. The report also gives some suggestions for immediate reforms.

— (TASMANIA).—*Industrial Department. Chief inspector of factories. Fourth annual report for 1918-19 on factories, wages boards, shops, etc.* Hobart, 1919. 26 pp.

Includes reports on the administration of the Factories Act, 1910, with its amendments; the Wages Boards Act, 1910, with its amendments; the Shops Closing Act, 1911, with its amendments; and the Footwear Act, 1918. Inspections under these acts numbered over 3,500.

CANADA.—*Civil Service Commission. The classification of the civil service of Canada. Setting forth classes of positions and rates of compensation for each class. Revised after hearing officers and employees in the service.* Ottawa, September, 1919. 853 pp. Price 50 cents.

— — — *Report of transmission to accompany the classification of the civil service of Canada. Describing the schedules for the classification of positions and the standardization of compensation, explaining their need, basis, and use and the method of their preparation, and including a discussion of the problem of personnel in the civil service of Canada with recommendations for a comprehensive employment policy and plan.* By Arthur Young and Company. Ottawa, 1919. 82 pp.

— (ONTARIO).—*Department of Public Works. Third annual report of the trades and labor branch, including the reports of the superintendent of trades and labor, chairman of the board of stationary and hoisting engineers, chief factory inspector, chief inspector of steam boilers, inspector of labor agencies, 1918.* Toronto, 1919. 72 pp. Illustrated.

Contains reports of employment bureaus of the Province of Ontario for the year ending October 31, 1918. During this period 26,407 men applied for work, 23,217, or 87.92 per cent, of whom were referred to positions. Only 55.9 per cent of the 41,525 calls for men could be filled. The number of women applying for work was 15,617, of whom 11,538 were referred to positions. In addition to these, 10,031 days' work was found for casual employees. Of the 23,844 requests for women workers, 73.21 per cent were filled. The number of employment offices in the Province (11 in 1918) was to be increased by more than 50 per cent during 1919.

FRANCE (DÉPARTEMENT DE LA SEINE).—*Office public des habitations à bon marché. Les cités jardins du Grand Paris. No. 1. Règlement intérieur (1).* Paris, 1918. 10 pp. No. 2. *Compte rendu moral des travaux du conseil d'administration de 6 Juillet 1916 au 1^{er} Janvier 1918.* Paris, 1918. 24 pp. No. 3. *Exposition de la reconstruction.* Paris, 1919. 4 pp. No. 4. *Vocu émis le 9 Mai 1919 par le conseil d'administration de l'Office Public d'Habitations à bon Marché du Département de la Seine.* Paris, 1919. 2 pp. No. 5. *Application des maxima de valeur locative aux maisons individuelles construites dans des cités-jardins créés par les Offices publics d'Habitations à Bon Marché (1).* Paris, 1919. 7 pp. No. 6. *Compte rendu des travaux du conseil d'administration de l'Office Public d'Habitations à Bon Marché du Département de la Seine pendant l'année 1918.* Paris, 1919. 14 pp.

Six pamphlets giving the regulations and scope of the Public Office of Low-cost dwellings of the Department of the Seine. A more extended report of this office, including the preliminary plans submitted by a number of architects appointed to examine and report upon the problem of garden cities for the Department of the Seine, was given in the July, 1919, issue of the MONTHLY LABOR REVIEW (pages 262 and 263.).

GERMANY. *Statistisches Reichsamt, Abteilung für Arbeiterstatistik. Beiträge zur Kenntnis der Lebenshaltung im vierten Kriegsjahre.* Berlin, 1919. 76 pp. 21. *Sonderheft zum Reichs-Arbeitsblatt.*

A supplement to the bulletin of the German Statistical Office, Division for Labor Statistics, giving the results of an investigation into the cost of living of German urban families during the fourth year of the war. The principal results of this investigation are summarized in the present issue of the Review on pp. 114 to 117).

GREAT BRITAIN.—*Civil Service Arbitration Board. (Conciliation and arbitration board for Government employees.) Awards and agreements. Vol. I—1st May, 1917, to 1st August, 1919.* London, 1919. 200 pp. Price, 4s. 6d. net.

— *Coal Industry Commission. Vol. I. Reports and minutes of evidence on the first stage of the inquiry. Vol. II. Reports and minutes of evidence on the second stage of the inquiry.* London, 1919. 414, 1,219 pp. Cmd. 359, Cmd. 360. Price, 3s. 6d. net and 7s. net.

Articles dealing with the situation in the British coal industry and the reports of the Coal Industry Commission were published in the MONTHLY LABOR REVIEW for May, 1919, pages 109 to 114; August, 1919, pages 78 to 86; and October, 1919, pages 23 to 30.

— *Ministry of Transport. Railway working. Statement showing the results of working the railways during the period of Government control of the railways in Great Britain (5 August, 1914–31, August, 1919) and Ireland (1 January, 1917–31, August, 1919).* London, 1919. 13 pp. Cmd. 402. Price, 2d. net.

— *National Relief Fund. Report on the administration, up to the 30th June, 1919 (in continuation of Cmd. 16).* London, 1919. 14 pp. Cmd. 356. Price, 2d. net.

INDIA.—*Department of Statistics. Index numbers of Indian prices 1861–1918.* Calcutta, 1919. II, 24 pp. Charts. No. 996. Price, As. 18 or 1 s. 3 d.

There was a rise of 125 per cent in the average level of prices as compared with the standard period 1873, the rise being 189 per cent in the articles of import and 99 per cent in those of export. A table which shows the unweighted index numbers of the average prices of the main groups of articles with their subheads in 1918 and for six months of 1919, as compared with 1913, the prewar year which is taken as 100, indicates the average rise during the war period for all articles to be as follows: 1914, 103; 1915, 106; 1916, 129; 1917, 137; 1918, 157; 1919, 190. The greatest rise in 1918 was 150 per cent in the group "metals and coal," and the least 24 per cent in "miscellaneous." In "textiles" the increase was 67 per cent, and in "food and drink" 43 per cent. The general average price for all groups for 1918 increased by 57 per cent, the rise being 147 per cent in articles of import and 29 per cent in those of export. The greatest rise in the first half of 1919 was 102 per cent in the group "food and drink."

— *Prices and wages in India. Thirty-fourth issue.* Calcutta, 1919. V, 278 pp. Charts. No. 971. Price, 2 Rs. or 3 s.

In three parts: Wholesale prices, retail prices, and wages. Regarding wages. returns from some industrial establishments indicate that, except in the paper industry of Bengal and the rice milling industry of Burma, there was a general rise in industrial wages in 1918 as compared with the preceding year, and with the prewar period. The general averages of index numbers computed on the rates of wage earners in different industries during January of each year from 1915 to 1918, as compared with the prewar period (January, 1914), are stated in the following table:

INDEX NUMBERS SHOWING MOVEMENT OF INDUSTRIAL WAGES IN INDIA DURING JANUARY, 1914 TO 1918.

Industries.	1914	1915	1916	1917	1918
Cotton, Bombay.....	100	103	103	106	129
Wool, Cawnpore.....	100	112	108	117	118
Mining (coal), Bengal.....	100	100	100	108	116
Tea, Assam.....	100	102	103	109	119
Brewing, Punjab.....	100	102	109	121	130
Jute, Bengal.....	100	101	100	101	103
Paper, Bengal.....	100	99	99	99	100
Rice, Rangoon.....	100	100	100	100	100

ITALY. *Ministero per l'Industria, il Commercio e il Lavoro. Direzione Generale del Credito, della Cooperazione e delle Assicurazioni private. Atti del Consiglio della Previdenza e delle Assicurazioni sociali. Sessione del 1916. Rome, 1918. 323 pp. Annali del credito e della previdenza, series II, vol. 17. Prima sessione del 1918. Rome, 1919. 202 pp. Annali del credito e della previdenza, series II, vol. 22. Seconda sessione del 1918. Rome, 1919. 234 pp. Annali del credito e della previdenza, series II, vol. 23.*

These three volumes contain the minutes of the session of 1916, and of the first and second sessions of 1918 of the Italian Social Insurance Council. The subjects under discussion at these sessions were the recognition and approval of the by-laws of scholastic and other mutual aid societies, of sickness and old-age insurance funds of railroad employees, of the old-age and invalidity insurance fund of workers in the Sicilian sulphur mines, the regulations for the carrying out of the decree of August 23, 1917, relating to compulsory agricultural accident insurance and the premium rates for this insurance, the new annuity rates proposed by the National Insurance Institute, and the regulations for the auditing of the financial condition and for the liquidation of life insurance companies.

— *Direzione Generale del Credito, della Cooperazione e delle Assicurazioni private. Provvedimenti in materia di economia e di finanza emanati in Italia in seguito alla guerra europea. Parte quinta: dal 1° Gennaio 1917 al 30 Giugno 1917. Rome, 1919. 543 pp. Annali del credito e della cooperazione, series II, vol. 10, part 5. Parte sesta: dal 1° Luglio 1917 al 31 Dicembre 1917. Rome, 1919. 336 pp. Annali del credito e della previdenza, series II, vol. 10, part 6.*

These two volumes form parts 5 and 6 of a compilation, economic and financial, of laws, decrees, etc., enacted in Italy during the European war.

JAPAN. *Bureau of General Statistics. Statistical résumé of the Japanese Empire. 33d year. Tokio, 1919. 185 pp.*

The publication gives general statistics for the Japanese Empire and colonies, among others tables showing wages and earnings of workers in various occupations by sex and by year, 1912 to 1916. It gives a list of life insurance companies, capital invested, number of members, also mutual aid societies for government employees and cooperative societies.

NEW ZEALAND. *Board of Trade. Third annual report. Wellington, 1919. 33 pp. Price, 1s.*

Considers the increases in the cost of living, the efforts at price regulations, the control of trade and industry, and the policies suggested to prevent or control monopolies. It is stated that from July, 1914, to May, 1919, the cost of living increased 42 per cent. In discussing the control of industry in connection with the campaign against rising prices it is stated that the ends to be

achieved by Government control are (a) to keep alive competitive industry, and (b) to control monopoly. It is recommended that, in order to carry out the policies of the board and to control industry effectively, there be established a Department of Industries and Commerce, consisting of "a minister of industries and commerce, a Board of Trade, a secretary of industries and commerce a secretary to the board." It is urged that the board be given power (a) to investigate the organization and business conduct of industry, especially protected industries already in existence; (b) to require annual and special reports from businesses and industries; (c) to investigate and make recommendations, and in suitable cases to enforce recommendations where infringements of the Commercial Trusts Act are alleged; (d) to investigate trade conditions in and with other countries, particularly in regard to the operation of monopolies and trusts; (e) to determine and prevent unfair methods of competition; (f) to bring about improvements in the methods of accounting used by businesses, particularly with respect to accurate and uniform methods of cost accounting; and (g) to investigate and report upon trade associations and control their activities.

— *National Provident Fund. Actuarial examination for the triennium ended 31st December, 1916. Wellington, 1919. 5 pp. Price 6d.*

— *Eighth annual report of the board for the year ended 31st December, 1918. Wellington, 1919. 3 pp. Price, 3d.*

ROUMANIA *Diracțiunea Generală a Statisticiei. Anuarul Statistic al României. 1915-1916. Bucharest, 1919. xxx, 343 pp.*

The official statistical yearbook of Roumania for the years 1915 and 1916 containing statistical data on climatology, organization, population, agriculture, means of communication (railroads, navigation, roads, posts, telegraph, and telephone), commerce, industry, stock companies, finance, public instruction, and administration of justice. The data on industry show that at the end of 1915 a total of 53,470 workers, among which were 4,679 female workers, were employed in 837 factories encouraged by the State through grants of special privileges. The annual pay roll of these factories was 49,795,673.60 lei (\$9,610,565). Data on workmen's insurance show that in the fiscal year 1913-14 a total of 217,772 persons were insured. Of this number 193,883 were males and 23,889 females. Medical aid in cases of sickness was given in 385,652 cases to insured persons and in 91,742 cases to members of their families.

SWITZERLAND (ZÜRICH, CANTON). *Statistisches Bureau. Die Ergebnisse der eidg. Berufszählung vom 1. Dezember, 1910, in den politischen Gemeinden des Kantons Zürich. Winterthur, 1919. 59 pp. 3 maps. Statistische Mitteilungen betreffend den Kanton Zürich. Heft 181.*

The results of the Swiss occupational census of December 1, 1910, in so far as they relate to the communes of the Canton Zürich. According to this census the population was distributed among the various occupations as follows:

DISTRIBUTION OF THE GAINFULLY ENGAGED POPULATION OF THE CANTON
ZÜRICH, BY SEX, OCCUPATION, AND CHARACTER OF THE COMMUNES, 1910

Character of the communes.	Num- ber of com- munes.	Popu- lation.	Gainfully engaged persons.		Gainfully engaged females.		Number of persons engaged in—					
			Num- ber.	Per 1,000 of popu- lation.	Num- ber.	Per 1,000 gain- fully engaged per- sons.	Farm- ing.	Indus- try.	Com- merce.	Trans- porta- tion.	Admin- istra- tive service, liberal profes- sions.	Per- sonal serv- ice.
Rural:												
Farming—												
Over 70 per cent.	36	18,608	10,260	551	3,985	389	8,072	1,574	238	156	189	26
Over 60 to 70 per cent.	27	16,688	8,549	515	3,982	347	5,609	2,258	310	197	195	30
Over 40 to 60 per cent.	34	26,826	13,115	508	4,252	324	6,922	4,754	674	325	277	63
Industrial—												
Over 40 to 60 per cent.	43	75,249	35,614	473	11,574	325	11,682	18,810	2,487	1,046	1,494	196
Over 60 to 70 per cent.	28	80,096	33,281	478	13,205	345	6,910	25,205	3,101	1,441	1,850	274
Over 70 per cent.	16	70,465	34,364	488	11,551	336	3,020	26,178	2,740	1,115	1,084	227
Urban												
Urban	2	215,983	101,252	469	30,481	300	1,933	51,322	26,059	7,706	8,922	2,311
Total		186,503	915,241	470	77,980	323	44,098	133,096	35,554	11,984	13,611	3,127

According to the preceding table the percentage of gainfully employed persons is much larger in the rural communes of the Canton Zürich than its industrial and urban communes. The percentage of gainfully employed females is largest in farming communities and lowest in the large cities. Of the gainfully employed population of the Canton, 55.1 per cent were engaged in industry, 18.3 per cent in farming, and 14.7 per cent in commerce.

— (ZÜRICH, CITY). *Städtisches Arbeitsamt. Geschäftsbericht für das Jahr 1918. Zürich, 1919. 31 pp. Chart.*

The annual report of the municipal labor office of the city of Zürich on the activities of the city's municipal and private employment offices during 1918. The activities of the municipal employment office during the five-year period 1914-1918 are shown in the following table:

STATISTICS OF THE ACTIVITY OF THE MUNICIPAL EMPLOYMENT OFFICE OF ZÜRICH,
1914-1918.

Year.	Vacant situations.			Applicants.			Situations filled.			Transient and non-resident applicants.
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
1914	8,471	2,713	11,184	16,485	2,630	19,115	6,904	1,694	8,598	9,533
1915	10,286	2,096	12,382	14,599	2,891	17,490	7,645	1,538	9,183	3,582
1916	13,008	3,414	16,422	12,524	3,137	15,661	10,252	2,212	12,464	3,073
1917	12,906	3,504	16,410	11,328	2,647	13,975	9,904	2,008	11,912	2,550
1918	13,506	3,123	16,629	13,446	2,287	15,733	11,020	1,673	12,693	2,053

The results for 1918 show an increase of 219 in the number of vacant situations, of 1,708 in the number of applicants, and of 786 in the number of situations filled. The report states that the termination of the war and the conse-

quent changes in the economic situation have exercised a strong influence on the labor market and caused a considerable decrease in the demand for labor, but that Zürich was spared an acute crisis. In addition to the vacant situations shown in the preceding table, 10,537 temporary situations for laundresses, charwomen, and female day laborers were registered and 10,396 of these were filled. According to the data shown in the preceding table the number of male and female applicants per 100 vacant situations was 99.6 and 71.6, respectively, and that of applicants of both sexes 86.1. Of the male applicants, 6,786 were skilled workers, 1,414 agricultural workers, and 5,246 unskilled workers.

The number of private employment offices operating in Zürich in 1918 was 29. Ten of these were free employment offices and the other 19 were operated for profit. The 29 offices combined registered 21,507 vacant situations and 15,773 applicants, and were able to fill 7,412 (34.4 per cent) of the former.

For the year 1918 the municipal employment office received a State subsidy of 14,713 francs (\$2,839.60), a cantonal subsidy of 3,000 francs (\$579), and a subsidy of 750 francs (\$144.75) from the Zürich Cantonal Federation for the employment of unemployed for payment in kind (Naturalverpflegung). In addition, the Central Office of the Swiss Employment Exchanges contributed 2,000 francs (\$386) to the costs of administration.

Unofficial.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *The Annals*. Vol. 86, No. 175. *The railroad problem—a discussion of current railway issues*. Philadelphia, November, 1919. 252 pp.

This volume is devoted largely to the current issues as to railway regulation and the participation of labor in the management of railroads. Its four parts contain articles on (1) Government operation, (2) Current proposals for regulation, (3) Unification of terminals, and (4) Railway efficiency and labor. Among the articles of special interest to labor are Women in the railroad world, by Pauline Goldmark; Should labor participate in management, by Glenn E. Plumb; and Railway efficiency and labor, by Captain O. S. Beyer, jr.

AMERICAN FEDERATION OF LABOR. *Study and report upon judicial control over legislatures as to constitutional questions*, by Jackson H. Ralston. Ordered prepared and printed in pamphlet form by St. Paul convention of the A. F. of L. Washington, 1919. 80 pp.

ARNOT, R. PAGE. *Facts from the coal commission*. Compiled by R. Page Arnot (Secretary Labour Research Department), for the Miners' Federation of Great Britain, with a foreword by Robert Smillie and Frank Hodges. London, Labour Research Department, 25 Tothill Street, Westminster, S. W. 1, 1919. 40 pp. Diagram.

Articles containing accounts of the coal commission, including the recommendations of the Sankey report, were published in the May and August, 1919, issues of the MONTHLY LABOR REVIEW, pages 109 to 114 and 78 to 86 respectively.

BARGERON, L. *L'Hygiène dans la Reconstruction des Usines*. Paris, 1919. 275 pp. Illustrated.

A monograph on industrial hygiene. In view of the reconstruction of factories in the devastated regions of northeastern France the author, basing his recommendations on his practical experiences as factory inspector, outlines guiding principles of shop hygiene to be observed in this reconstruction work. He expresses great fear that in the haste of reestablishing production scant consideration will be given to industrial hygiene in the rebuilding and equip-

ment of the factories. The volume is divided into ten chapters dealing with the following subjects: (1) Temperature of the working place; (2) lighting; (3) effects of compressed air; (4) dust; (5) foul and humid air; (6) installations for personal hygiene; (7) spittoons, privies; (8) factories of poisonous substances and explosives; (9) food and drinks; and (10) sports. In addition to laying down principles of industrial hygiene the author describes numerous appliances for the practical carrying out of these principles. The text is copiously illustrated.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING. *Justice and the poor. A study of the present denial of justice to the poor and of the agencies making more equal their position before the law with particular reference to legal aid work in the United States.* By Reginald Heber Smith. New York, 576 Fifth Avenue, 1919. 271 pp. Charts. Bulletin No. 13.

This bulletin constitutes the second in a series of studies of legal education and cognate matters that is in course of publication by the Carnegie Foundation, under the general charge of Alfred Z. Reed. It sets forth the defects in the administration of the law which work in effect a denial of justice to the poor or the ignorant; and the agencies, supplementary to the existing machinery, whose object is to remedy these defects. "The outcome and the object of the report is the effort to prove that these various agencies, if properly articulated with the existing system of the administration of justice, can be made to secure, so far as human means can do, the practical equality of all men before the law and to afford to all citizens without regard to wealth or rank or race the means for a prompt, inexpensive, and fair adjudication of their complaints."

COLSON, C. *Cours d'economie politique. Livre deuxième. Le travail et les questions ouvrières.* Revised edition. Paris, F. Alcan, 1917. 531 pp.

This book is a course of study in economics and deals with labor problems in a very detailed way. It studies the relation between population and labor productivity; the Malthusian theory; mortality; immigration and its effects on labor standards; and the effect of increased production on wages. It gives a historical survey of various labor organizations; a study of wages, hours, rest periods, apprenticeship, cooperative associations, labor contracts, unions, employers' organizations, strikes, lockouts, minimum wage, etc.

A special chapter is devoted to social insurance. It treats of the theory of insurance, probability and risks, premiums, workmen's compensation and employers' liability, pensions, mutual help associations, State subsidies. It gives the advantages and disadvantages of various systems in different countries, the legal measures taken by different governments with a view toward the health and security of workers, and ends with a discussion on the value of compulsory State insurance. The rest of the book deals with public and private charities, and the means of increasing the welfare of the workers. There is a table of relative increase in wages and cost of living in France, 1810-1910.

COX, HAROLD. *The coal industry. Dangers of nationalization. Second impression.* London, Longmans, Green & Co., 1919. 18 pp.

This pamphlet is based upon evidence given by the author, editor of the Edinburgh Review, before the Coal Commission.

Deutscher Buchbinder-Verband. *Bericht des Vorstandes, 1918.* Berlin, 1919. 75 pp.

The annual report of the directorate of the German Bookbinders' Federation for 1918. With respect to the labor market the report states that in the first 10 months of 1918 the number of unemployed male bookbinders never exceeded 0.6 per cent and that of female workers 1.6 per cent. In November, however,

the respective figures increased to 2 and 2.7 per cent. and in December to 4.5 and 6.5 per cent. The membership increased slightly during the first quarter and decreased during the second quarter by 324, but in the third quarter it increased again by 1,911, and the phenomenal increase of 15,608 is reported for the last quarter of 1918. On June 30, 1914, the federation had 16,413 male and 15,968 female members; that is, both sexes were equally represented. At the end of 1918 the composition of the membership had undergone a very great change, for the male members numbered only 10,591, and the female 26,378. The report points out that this disparity in the membership of the two sexes exercises an unfavorable influence upon the finances of the federation, because the administrative expenditures for female and male members are the same while the membership fees of female members are considerably lower than those of the male members. The total receipts of the federation during 1918 amounted to 675,376.53 marks (\$160,739.61) and the expenditures to 429,664.75 marks (\$102,260.21). With the exception of administrative costs, unemployment benefits with 55,650.60 marks (\$13,244.84) and sick benefits with 81,870.15 marks (\$19,485.10) were the two largest items of the expenditures. The federation is attempting to bring about a national collective agreement (Reichstarifgemeinschaft.)

The report regrets the lack of interest during the war by affiliated national federations in the bookbinders' international secretariat. The German, Austrian, and Hungarian federations were the only contributing federations in 1916, and in 1917 even the Hungarian Federation failed to make contributions. *Deutscher Holzarbeiter-Verband. Jahrbuch, 1915. Berlin, 1919. 352 pp.*

The yearbook for 1915 of the German Woodworkers' Federation. This yearbook deals with the effects of the war on the woodworking industry, the joint industrial league of this industry, the wage movement, the collective agreements in force and newly concluded, the membership movement, the financial report of the federation, monthly unemployment statistics, accident statistics, etc. The data on accident statistics will be discussed in an article in the MONTHLY LABOR REVIEW.

FOERSTER, ROBERT F. *The Italian emigration of our times. Cambridge, Harvard University Press, 1919. 556 pp.*

A study of the Italian emigrant in his varied relations both to Italy and to the countries to which he goes, and of the influences affecting emigration. Four chapters deal with Italian emigration to the United States. Italian immigrants in various skilled and unskilled occupations are discussed, one chapter being devoted to the small share taken by the Italian immigrant in the agriculture of this country. "The Italian Experience" gives information about: Considerations of employment, wages, saving; Housing; Food; The question of health; Attitude of the American employing and laboring classes. A bibliographical index appears on pp. 537-546.

FRANKEL, LEE K., AND DUBLIN, LOUIS I. *Influenza mortality among wage earners and their families. A preliminary statement of results. Reprinted from American Journal of Public Health, Vol. IX, No. 10, October, 1919, pp. 731-742.*

This paper is summarized on pages 223 and 224 of the present issue of the MONTHLY LABOR REVIEW.

GEARHART, EDNA B. *List of references on workshop committees. In Special Libraries, Industrial Number. Boston, Mass., October, 1919. Pp. 203-208.*

Annotated bibliography of books and magazine articles, including references to printed plans in operation. A partial list of firms that have inaugurated

some form of representative shop committee plan was published in the MONTHLY LABOR REVIEW for September, 1919, pp. 123-125.

GIESE, F. *Die Verfassung des Deutschen Reiches vom 11. August, 1919. Berlin, Carl Heymanns, Verlag 1919. 438 pp. Taschen-Gesetzammlung 19.*

The text of the new German constitution with commentaries. A translation of the socio-political provisions of the new constitution was published in the December issue of the MONTHLY LABOR REVIEW (pp. 132 to 135).

HARL, MRS. CHARLES M. *Profit sharing. A solution of the problem between capital and labor as it appears to one who is affiliated with neither. Council Bluffs, Iowa [1919]. 8 pp.*

HONEGGER, HANS. *Godin und das Familistère von Guise. Zürich, 1919. 111 pp. Zürcher Volkswirtschaftliche Studien. New series, No. 6.*

A history of the life of Jean Baptiste André Godin and of his practical life work, the familistère settlement and productive association at Guise (France).

HUTCHINSON, EMILE JOSEPHINE. *Women's wages. A study of the wages of industrial women and measures suggested to increase them. New York, Columbia University, 1919. 179 pp. Studies in history, economics, and public law, vol. 89, No. 1.*

The author analyzes the wage data gathered by various Federal and State agencies and commissions, the effects of minimum wage legislation, trade-unionism, and vocational education upon women's wages, and points out methods which may be expected to result in an improvement in women's industrial status.

INTERNATIONAL ASSOCIATION OF CASUALTY AND SECURITY UNDERWRITERS. *Eternal vigilance is the price of success. Address of the president, Arthur A. Childs, Ninth annual convention, the Greenbrier—the White Hotels, White Sulphur Springs, W. Va., September 16-19, 1919. [N. p., 1919.] 19 pp.*

Two subjects to which considerable attention is given are workmen's compensation insurance and accident and health insurance. Of the first, the total written insurance for 1918 by the 40 stock companies writing compensation insurance was \$94,861,458, which was a gain in premium income of over \$30,000,000. The underwriting profit was only \$197,933. In 1917 on a premium income of \$64,640,671, 32 of the stock companies took an underwriting loss of \$935,712. Thus a decided improvement was reflected for the year. The demand for accident and health insurance during 1918 is called "phenomenal." "Probably the direct and indirect hazards of the war, together with the scare created by the influenza pandemic, were largely responsible for the increase of over nine million in premiums. The total accident and health premium income of 75 stock companies was \$49,696,511. The combined experience on both accident and health insurance showed an underwriting loss of \$748,228. Fortunately for the companies writing these kinds of insurance the accident losses were considerably below normal, notwithstanding the increase in automobile accidents."

JOURNAL OF INDUSTRIAL HYGIENE. Vol. 1, No. 7. New York, Macmillan Co., November, 1919. pp. 369, 120 pp.

An article by Dr. Penteado Bill on The electrostatic method of dust collection as applied to the sanitary analysis of air, which was presented as his thesis for the degree of Doctor of Public Health, gives a very specific analysis of the method with the conclusions that:

"The electrical precipitation method of dust collection in this series showed 62.1 per cent greater average returns than the Palmer water spray sampler, for the same amount of air and under identical conditions.

"The Palmer suspensions can give factitious counts because of agglomeration of particles in aqueous suspension. For this reason the actual number of particles present may be higher than those reported.

"The electrical precipitation apparatus, as used in this study, is far too bulky for ordinary field work, but can be simplified and made portable.

"The method of electrical precipitation has certain advantages over the Palmer, viz:

"(a) Absence of suspending medium.

"(b) Uninterrupted passage of air.

"(c) Facility of determining the percentage of dust present in the air in the sample studied, and the percentage of air dust represented by the weight of total sediment.

"These conclusions seem to warrant further study of electrical precipitation of dust as applied to the sanitary analysis of air."

Other articles are on Flatfoot and its prevention, by Dr. Edward H. Bradford; Report on certain organs in a case of fatal poisoning by arseniuretted hydrogen gas, by Sheridan Delépine; The health hazards and mortality statistics of soft-coal mining in Illinois and Ohio, by Emery R. Hayhurst, whose article on the subject which appeared in *Modern Medicine* for July, 1919, was summarized in the September, 1919, issue of the *Monthly Labor Review*, pages 291 to 294; and Applications of psychiatry to industrial hygiene, by Dr. Stanley Cobb, a digest of which is published in this issue of the *Review*, pages 226 to 229.

LABRY, RAOUL. *L'Industrie Russe et la Révolution. Paris, 1919. 288 pp.*

A review of Russian industry during the revolution based on the author's personal experiences, and on official and unofficial information gathered by him during the revolution while attached to the Institut Français at Petrograd. Following the introduction the author devotes the first chapter to a discussion of the development of the social democratic party and the revolutionary organization of the Russian working class, and in describing the industrial conditions in Russia during the war up to the time of the revolution. Other chapters deal with the industrial policy of the provisional government and of the soviet; industrial Bolshevism and its effect, and industrial conditions in the Ukraine under hetman Skoropadski. The volume contains numerous statistical data on wages, employment, output, prices, etc., and it includes the text of the regulations relating to the control of production, sales, and storage of first materials by the workers and the management and the organization of nationalized establishments; the decree establishing the National Economic Council, and that regulating wages in the metallurgical establishments of Petrograd and its suburbs.

LAUNAY, L. DE. *Problèmes Économiques d'après Guerre. Paris, 1919. 319 pp.*

In this volume the author, a mining expert and member of the Institut de France, discusses the postwar economic problems of France, outlines a reconstruction program, and preaches an economic war against Germany. His reconstruction program covers the following subjects: (1) Industrial organization; (2) supply of raw materials and economic defensive; (3) transportation; (4) labor; and (5) natural resources.

In discussing postwar industrial organization the author condemns collective organization of industry under state control and advocates free association, as the best means of which he recommends the extensive establishment in industry as well as in agriculture of syndicate offices for the purpose of sale, pur-

chase, and scientific research, so-called "comptoirs." Next, he emphasizes the great advantages of scientific shop management, specialization, quantity production of standardized staple articles, economy in the consumption of fuel, and better use of the forces of nature.

With respect to the supply of raw materials he recommends in the first place that by concerted action the Allies should for years to come limit the supply of Germany with foreign raw materials, furnishing her only what she needs for feeding and clothing her own population, pointing out that such a process of starving German industry would prevent Germany from recovering her foreign trade and leave her without means to renew hostilities. He then reviews the facilities for provisioning France with the principal raw materials such as cotton, wool, silk, rubber, oils and fats, iron, copper, tin, nickel, and phosphates.

Under the heading transportation he discusses the tonnage loss of France through German submarine activities and proposes to replace it through extensive shipbuilding, the purchase of tonnage from England and America, continuation of transport agreements with foreign countries having a large merchant marine, development of French ports, and creation of free zones in them. He points out the defects of the French railroad system, and discusses the proposed construction of transversal lines, the progress in railroad construction during the war, the scarcity of rolling stock, the future financial régime of the railroad companies and advocates the speedy construction of the long projected tunnel under the English Channel. He calls attention to the advantages of river and canal transportation over railroad transportation and recommends extension of the net of canals and general improvement of rivers and waterways. Finally he advocates extensive building of good national roads for wagon and automobile traffic under the supervision of a board modeled after the English road board.

As concerns the labor question, the author entirely ignores the social labor problems and limits himself to a discussion of demobilization measures and of the shortage of male labor caused by the great loss of life during the war. As remedies for this shortage he recommends more rational use of male labor, introduction of the Taylor system, increased employment of female labor in occupations usually not filled by women in prewar times but for which war experience has shown them to be suited, and finally greater use of foreign (Italian, Spanish, Polish) and colonial labor (Tunisians, Kabyles, Moroccans, and Chinese).

The last chapter of the volume is devoted to a discussion of fuel problems and of greater exploitation of the forces of nature.

MODERN MEDICINE. Vol. 1, No. 7. Chicago, The Modern Hospital Publishing Co., November, 1919. pp. 549-650.

Under the title of The scope of the physical examination in industry, Dr. C. D. Selby outlines the main points to be observed in such an examination of employees and gives the plan in operation at the Toledo plant of the National Malleable Castings Co. An article by Dr. Charles A. Lauffer on Industrial health hazards considers such hazards under the classification of (1) poisons, dusts, fumes, gases; (2) heat, humidity, ventilation; (3) lighting; (4) crowding; (5) fire peril; (6) association with diseased employees; and considers various remedial measures suggested for dealing with them. Dr. Frankwood E. Williams discusses Nervous and mental disease as a problem in public health, with the conclusion that the importance of such disease in this relation lies "not alone in the number slain, though the number is large; not alone in the number of lives crippled and blasted, though the number is larger; not in the

burden of expense entailed, though it is enough to give any community pause; but in the damage done to social structure by the struggles at adjustment and compromise of individuals ordained to failure—more often than not failure with consequences more than individual—unless protected and safeguarded by a community manifesting a degree of understanding greater than has ever yet been shown. Infections may be eradicated; nervous and mental disease may be largely reduced in number, though it may not be so readily done away with. But the consequences of nervous and mental disease may be eliminated by an intelligent, persistent public health effort."

Other articles of special interest are Health education in industry, by Dr. W. A. Evans; Mercurial poisoning, by Dr. R. P. Albaugh; Malingering—involving the problem of getting sick or injured employees back to work, by Dr. Judson C. Fisher; Columbia University health service, by Dr. William H. McCastline; How Tuskegee Institute is promoting better health conditions in the South; and Industrial clinics in general hospitals, by Dr. D. L. Edsall. An extract from the last article appears on pages 224 and 225 in this issue of the MONTHLY LABOR REVIEW.

MOORE, TOM. *Labor's interest in safety. An address delivered at the fifth annual meeting of the Ontario Safety League. Toronto, 1919. 8 pp.*

MUTO, SANJI. *Employers and workers. The urgent need for universal labor legislation in the matter of sickness, pensions, relief to families of deceased workers, industrial, and moral training, etc. An appeal. Washington, October, 1919. 21 pp.*

This appeal by a Japanese employer of labor on a large scale for many years is intended to call attention to some of the more important measures designed for the furtherance of the relief of employees and operatives and their families, and the improvement of their physical and moral welfare, which have been adopted by several large industrial establishments and Government works in Japan. Its purpose is to point out "the urgency of embodying in universal labor legislation a minimum of relief measures which shall make sufficient provision for the subsistence of workmen and their families in distress from causes beyond their control."

NATIONAL CIVIC FEDERATION. *Laws of France, 1919. Town planning and reparation of damages caused by the events of the war. Translation by Roscoe Pound. New York, Metropolitan Tower, October, 1919. 51 pp.*

Under the town planning law, enacted March 14, 1919, every city in France of 10,000 inhabitants and more is obligated to work out, prior to March 15, 1922, a comprehensive plan covering all matters of municipal development (roads, squares, playgrounds, parks, monuments, public buildings, etc.), inclusive of works and utilities for the convenience and health of the public (waterworks, sewers, etc.).

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Wartime changes in wages. September, 1914–March, 1919. Boston, September, 1919. 128 p. Research report No. 20.*

A digest of this report appears on pages 141 to 144 of this issue of the MONTHLY LABOR REVIEW.

— *Works councils in the United States. Boston, October, 1919. 135 pp. Research report No. 21.*

An account of the operation of works councils in 225 establishments in the United States. A list of industrial concerns having a form of employee representation and a bibliography are appended. A digest of this report appears on pages 191 and 192 of this number of the MONTHLY LABOR REVIEW.

NATIONAL SAFETY COUNCIL. *Safe practices. No. 30. Trucks and wheelbarrows.* Chicago, 168 N. Michigan Avenue. [1919.] 12 pp. Illustrated. Price, 25 cents.

NATIONAL TRANSPORT WORKERS' FEDERATION. *Report of the eighth annual general council, Newcastle-on-Tyne, June 6th and 7th, 1918.* London, 8, St. Martin's Place, Trafalgar Square, W. C. 2. [1918.] 106 pp.

NATIONAL WOMEN'S TRADE-UNION LEAGUE OF AMERICA. *English women in the labor and cooperative movements. Three speeches delivered before the seventh biennial convention of the National Women's Trade-Union League, Philadelphia, June 2-7, 1919.* Chicago, 64 West Randolph Street. 1919. 27 pp.

The speeches are on Women and the labor world, by Margaret Bondfield; women as cooperators, by Mrs. Eleanor Barton; and Women workers of England, by Mary Macarthur.

— *Women in trade-unions in the United States.* Chicago, 64 West Randolph Street. 1919. 15 pp.

A brief outline of the history of the women's trade-union movement in the United States.

NATIONAL WORKMEN'S COMPENSATION SERVICE BUREAU. *Manual classifications code. Workmen's compensation.* Revised April 1, 1919. New York, 1919. 66 pp.

NEW JERSEY STATE CHAMBER OF COMMERCE. *Bureau of State Research. Joint industrial council for New Jersey.* In 'New Jersey.' Vol. VI, No. 10. Newark, July, 1919. Pp. 133-140.

A tentative plan for a joint council developed through the investigations made by the Bureau of State Research, which proved the need for such a council in the State.

— — *Shop committees and industrial councils. Parts I and II.* 'New Jersey,' Section 2, Vol. VI, No. 10. Newark, July, 1919. 63 pp. Consecutive No. 18.

This report, the result of an investigation by the Bureau of State Research, discusses the general need for reorganization and for greater cooperation between the different factors concerned in labor problems and describes the shop committee plans in force in 13 establishments. These plans include examples of all the different types of shop committee systems in force in this country. In the appendixes are given synoptical tables of shop committee systems; plans for the establishment of industrial councils; labor's views on "company unions" and "shop committees," and, under the title of "A new motive in industry," a description of the system at the Rock Island Arsenal and the report of the British building trades. A digest of this report appears on pages 193 and 194 of this number of the MONTHLY LABOR REVIEW.

PICKARD, BERTRAM. *A reasonable revolution. Being a discussion of the State bonus scheme—a proposal for a national minimum income.* London, George Allen and Unwin (Ltd.), 1919. 78 pp.

An amplification of the State bonus idea originally put forward by Dennis Milner in his pamphlet, *Scheme for a State Bonus*. The author, however, states that in some parts of the book the method of presentation is colored by his own personal valuation of the State bonus scheme. The proposals contained in this scheme are summarized in the words of Mr. Milner as follows:

(a) That every individual, all the time, should receive from a central fund some small allowance in money which would be just sufficient to maintain life and liberty if all else failed.

(b) That as every one is to get a share from this central fund, so every one who has any income at all should contribute a share each in proportion to his capacity.

PLUMB PLAN LEAGUE. *Labor's plan for Government ownership and democracy in the operation of the railroads. Based on statements by Glenn E. Plumb before the Interstate Commerce Committee of the United States Senate, with additional material.* Washington, 447-453 Munsey Building, 1919. 32 pp. Pamphlet No. 1.

PORTLAND CEMENT ASSOCIATION. *Accident prevention bulletin.* Vol. 5, No. 6, November-December, 1919. Chicago, 111 West Washington Street, 1919. Pp. 79-150.

This issue contains the proceedings of the cement sectional meeting of the National Safety Council's eighth annual congress held in Cleveland, October 1 to 4, 1919.

PROTESTANT EPISCOPAL CHURCH. *Joint commission on social service. Third triennial report submitted to the General Convention, 1919.* New York, Church Missions House, 1919. 42, 191 pp.

Greatest prominence is given to a consideration of the problem of industrial relations, which is placed foremost among the special problems examined on account of its "urgent and intrinsic importance." The history of social and industrial movements in the United States is traced and analyzed, and the report finds that we are "confronted with a larger issue than we have yet commonly or consciously faced. It revolves about the question of what is or should be after all the proper relation between work, religion, and life."

STEELE, RUFUS. *Aces for industry.* Boston, Houghton Mifflin Company, 1919. 93 pp.

An argument, in the form of a narrative, for the establishment of apprentice schools in industrial plants, the claim being that industrial intelligence, skill, and loyalty could be developed through this means.

WADIA, B. P. *A memorandum on labor problems in India.* London, Victoria House Printing Co. (Ltd.), July, 1919. 12 pp.

The author is president of the Madras Labor Union and fraternal delegate from the first trade-union in India to the British Labor Party and the Parliamentary Committee of the Trades-Union Congress. The exceptional labor conditions in India are explained in the text of the memorandum and emphasized by appendixes containing letters from Indian trades-unions.

— *Statement submitted to the joint committee on Indian reforms.* London, Indian Parliamentary Committee, 1 Robert Street, Adelphi, WC 2, 1199. 8 pp. Price, 2d.

Brief exposition of the conditions surrounding labor in India, concluding with an earnest "appeal to the Joint Committee to enable the Indian laborer to obtain some political power, to set his feet on the road of political advancement, and thereby of his own uplift."

WARREN, KATHERINE. *List of references on labor turnover. In Special Libraries, Industrial number.* Boston, Mass., October, 1919. Pp. 198-203.

WEEKS, ESTELLA T. *Reconstruction programs. A comparative study of their content and of the viewpoints of the issuing organizations. Prepared for the Research section, Industrial committee, War work council of the National Board, Young Women's Christian Associations.* New York, The Womans Press, 1919. 95 pp. Chart.

Various reconstruction programs are analyzed and their chief points compared without any attempt being made to argue for or against them. There is a foreword by Herbert N. Shenton, of the Council of National Defense; an introduction entitled "What is reconstruction?"; four parts, in which the material analyzed is grouped under the heads of Working men and women—their life and work. Collective bargaining, Individual Democracy, and International labor problems; a postscript headed A new spirit and a new road; and a bibliography of programs of reconstruction.

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Employees' Representation in Management of Industry.¹

By ROYAL MEEKER, COMMISSIONER OF LABOR STATISTICS.

THE multitude of causes making for the general dissatisfaction prevailing among workers which is called industrial unrest may be compressed under three heads: (1) Dissatisfaction with their wages, hours, and earnings—a feeling on the part of the workers that they are not receiving a fair share of the product of industry; a widespread belief that workers are being exploited by owners, employers, and their managers. The rapid rise in prices has greatly strengthened this belief even among those workers who have secured wage increases in excess of increases in the cost of living. Many thousands of workmen who have profited greatly by the price upheavals of the war period firmly believe they are worse off than before the war, or, at least, that the employers have gained more than the workmen and hence the workmen are being done by the employers. (2) Dissatisfaction with the management of industry—a feeling that not only are the workers being exploited but that the “enterprisers” are not as enterprising and their managers not as capable as has been commonly supposed. Work is made needlessly monotonous and uninteresting and production is thereby curtailed. The workers feel that industries are being conducted from a distance by men who have little or no first-hand knowledge of conditions and who do not understand the workers’ point of view, knowledge, and capacity. These grievances are due in large part to big business organization which has brought about what may justly be called “absentee landlordism” in industry. (3) Dissatisfaction with the nature of their work—a feeling that industry is a treadmill for workers of all kinds, but especially for manual workers, and that the opportunities for successful and permanent escape into managerial, employing, and capitalistic positions are scarce and growing scarcer every day.

Through collective bargaining workers have long exercised a greater or less degree of control over wages, hours, and conditions of

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labor. During the war the principle of collective bargaining was of necessity, albeit in many cases rather grudgingly, recognized by all employers engaged on direct Government work or in the production of essentials. The Quartermaster Corps, the Ordnance Office, the Emergency Fleet Corporation of the Shipping Board, the National War Labor Board, the Fuel Administration, and many other Government agencies, sought to secure greater and more continuous production by means of collective agreements covering wages and hours and by establishing committees to represent the workers in dealing with the management on shop conditions. Since the signing of the armistice, Government control over industry has been either abandoned or greatly relaxed and industrial warfare has grown more extensive and more bitter. The elephantine governmental machines built and set up to adjust labor disputes were clumsy and cumbersome, and oftentimes worked against each other so that a labor adjustment made by one agency produced labor maladjustment in all other fields. Each agency dealing with labor was a law unto itself. The terms "cooperation," "coordination" and "correlation" were heard on every hand until they became a weariness to the flesh, but the labor adjusters seldom were able to cooperate, coordinate, or correlate anything. I do not say this in the spirit of caviling criticism. No one is to be blamed. On the contrary, great praise is due to those who, in spite of constitutional inhibitions and public indifference, succeeded in partially organizing our industrial chaos. It is greatly to be regretted that these men were not able to formulate a national labor policy for war to be continued in peace. Probably if the war had continued four more years a national labor policy must have been worked out, with the administration centered in one national industrial commission or in a series of commissions, one for each industry. Numerous district boards to take care of local disputes would have been necessary under either system. Of course, no one would be willing to have the war prolonged for four days, even to secure such a highly desirable result as the establishment of a national system of adjusting labor grievances and determining industrial policies on a democratic basis. We can only hope that the terrors of peace will be as potent as the horrors of war in compelling the Bolsheviki of the right and of the left to come together on a reasonable compromise.

Absentee Ownership of Industrial Establishments.

ABSENTEE landlordism is as bad in the field of economics as in the field of politics. Labor unrest in the present-day meaning of the term is a natural and inevitable result of the industrial revolution, machine production, absentee ownership of industrial estab-

lishments, and the centering of industrial management in the hands of managers of finance whose offices are in the big banks and office buildings of the centers of finance and trade. Strikes, in the modern sense, were practically unknown until industrial units had grown to such a size as to erect formidable barriers between the workers on the one side and the responsible owners and managers on the other. The spirit of antagonism against the absentee ownership of farms in Kansas and Nebraska and other Western States, which culminated in the Farmers' Alliance and Populist movements, manifests itself to-day against the absentee owners of industry.

Lack of interest in work grows out of absentee ownership. The absent industrial landlords, interested only or principally in dividends, employed experts, scientific managers, to produce a substitute for the old-time workman's interest in his work. The scientific managers have been attacked so violently and so frequently that I feel obliged to apologize for referring at this point to the most obvious and fundamental error contained in their original program. The scientific managers did not, in the beginning of the efficiency movement, differentiate between the workman and the machine or tool with which he worked. Men and machines were to be made to do each operation the "easiest" way; that is, with the least lost motion and expenditure of effort. The scientific managers have not yet grasped fully the difference between a man and a machine and the economy of making use of the heads of the workers as well as their arms and legs. A good deal is said about the worker's psychology, as though the worker were some strange, wild beast with a peculiar psychology all his own, quite different from the psychology of employers and managers. It is because the psychology of the worker is the same as the psychology of the employer and the manager that strikes and lockouts occur with such distressing frequency.

If we grant that a works manager has more brains and knowledge than any of the employees under his direction, he should be able to organize and plan the work so that if the workmen, instead of following their own devices, follow the plan laid out, the output would be bettered both in quantity and quality while the physical energy expended to attain this output would be lessened. The theoretical ideal of maximum output with minimum expenditure of effort, which can be figured out by mathematical formulas and pictured on charts, is never attained in practice. A much more imperfect layout, which leaves much to the ingenuity and initiative of the individual workmen, in practice almost always achieves much better results. A man will willingly work much harder, expend much more energy, and be much less fatigued working on a job which he has a part in planning, and for the results of which

he is responsible. The present-day movement for industrial democracy is a partial recognition of the fundamental psychological phenomenon that industrial fatigue is not simply an engineering question to be stated mathematically in foot-pounds per hour or even a physiological question having to do with calories burned up in the body. Work is hard primarily because it is uninteresting and monotonous, or easy because it demands ingenuity or skill. Paradoxical as it seems, the way to make work easier is to make it harder by requiring more of the workmen. The mental application required or the muscular effort put forth has little to do with the hardness of a job. In so far as scientific management has resulted in merely breaking processes up into their component parts, segregating so far as possible the purely muscular and mechanical operations from the creative and planning functions, so-called "efficiency" has resulted in the most disastrous inefficiency. The "easier" specific operations or fractions of operations have been made, the harder they have become. All the efforts of the scientific managers and efficiency experts to arouse, increase, and maintain the interest of the workman in his work are bound to be fruitless unless the work itself is made interesting. The worker must be called upon to use his head in planning as well as his hands and feet in executing his work if contentment is to be attained in industry.

The Whitley Plan in Great Britain.

DURING the war the scarcity of workers and the need to increase output of essentials gave the workers great power. Private employers and Governments were obliged to give more consideration to the rights and desires of laborers than was ever given before. The fear that employees might use their vastly increased power to seize political control and perhaps revolutionize and even socialize industry and private property led private employers the world over to experiment with different plans for participation by employees, to some degree, in the "management of industry." The Governments of the world, recognizing the seriousness of the labor unrest, have tried to guide and control the efforts of the workers to secure more power in the planning and carrying out of industrial policies. Great Britain has been experimenting with the Whitley system of organizing industries into national and district joint industrial councils and works committees. National joint industrial councils have been set up in some 50 industries, besides the councils established in the Government departments for both manual and clerical employees. It must not be assumed that these industries are fully organized under the so-called Whitley system and that all industrial unrest

has become a thing of the past. In fact, the national joint industrial councils are analogous to the roof of a house suspended in mid-air with no supporting side walls or foundations upon which to rest. Speakers and writers are wont to refer glibly to the "solution" of labor unrest worked out and put into practice in Great Britain. The facts are that only three industries have set up complete "Whitley systems" of joint industrial representation of employers and employees, with a national council and district councils for the industry and works committees for individual shops, and these three industries are relatively insignificant, namely match, rubber, and pottery manufacturing. I am told that there are only two match factories in Great Britain. Rubber manufacture increased in importance during the war. Pottery is of far more importance than the other two industries, but does not rank with the great basic industries of Great Britain. Even in the three fully organized industries the organization is almost purely formal, being for the most part a paper organization. It must not be assumed that this interesting attempt to make industrial management more democratic has failed. It is merely in the experimental stage. The system has not been accepted by either employees or employers generally. It must not be too hastily assumed that Great Britain has discovered a magic formula for "solving" all industrial unrest. It might seem from the wildly exaggerated accounts which have appeared in some quarters that the eager industrial alchemists in Great Britain seeking after the industrial philosopher's stone have found instead the Blarney stone. The search has, however, only just begun and what, if anything, will be found can not yet be foretold. The experts in the division of the Ministry of Labor which is dealing with these industrial councils, holding meetings with employers and employees constantly and setting up new national industrial councils about every week, do not proclaim that industrial democracy has been achieved and labor unrest solved by the organization of national councils. Everything is still in the experimental stage, with a strong probability that the first experiments will be, at best, only partially successful and that only by trial and error and after many experiments will a solid basis of settlement be reached.

It was my good fortune to be present at the first industrial conference called by Premier Lloyd George, which met in London February 27, 1919. This was a most impressive assemblage and it transacted an amazing amount of business in its lifetime of one day, especially as the whole forenoon was given up to an oratorical Donnybrook fair in which everybody took a crack at the premier's head, while he sat by and really seemed to enjoy the proceedings. As a result of this first conference, a joint committee consisting of 30 representatives of

employers and 30 representatives of employees was appointed. This committee reported on April 4 recommending the establishment of a permanent industrial conference, made up of representatives of employers and employees to meet annually or at the call of the Government and to advise the Government in matters of industrial policy. It was intended to be a sort of industrial parliament or advisory council. Its recommendations will have no binding force, but they may and probably will be very illuminating and helpful to the political Government. This extra-legal industrial parliament is merely another industrial experiment. It may eventually help to solve the problem of industrial unrest, but it hasn't done so yet. The four biggest trade-union organizations, namely, the Textile Workers, the Engineering Trades, the National Union of Railwaymen, and the General Workers' Union, have refused to send, or at least have refrained from sending, representatives to the permanent industrial conference. The employers who deal with these union men are also holding aloof.

Employees' Representation Plans in the United States.

IN OUR own country, as contrasted with Great Britain, nothing so ambitious nor so well thought out has been tried. During the war numerous "shop committees" giving a measure of representation to the workers were set up in many establishments, but no permanent nation-wide organization was created to tie these shop committees into a system, unless perhaps the Shipping Board and the Railroad Administration may be spoken of as permanent bodies.

The plan to bring the employees into closer relations with their employers by means of "shop stewards," "shop committees," "works councils," or other means is often hailed as the dawn of a new democracy in industry. It is new as compared with 10 years ago, or even 5 years ago; but it can not be too emphatically stated that democracy in industry is not a discovery of the great World War. In fact, with all the shop committees and works councils of to-day, we have much less democracy in industry than obtained 40 years ago or even in the Middle Ages, or at any time before the introduction of power-driven machinery with its tendency to segregate the employers and managers from their employees. The shop committee is the present-day attempt to restore some of the democracy lost through machine industry and big business. While it is, of course, impossible that there can ever be as complete democracy in a large plant as in a small plant, it is often true that the workers' committees of the large plants are able to secure better conditions and more consideration for the workers than the workers in the smaller plants are able to secure for themselves.

The different types of shop committees and works councils in this country which I have been able to examine may be divided into three pretty distinct groups, namely (1) closed-shop committees of union workmen, chosen exclusively by union men affiliated with national or international unions; (2) open-shop committees, composed of workers chosen by the votes of all workers who have been employed in the shop the required period of time; (3) open-closed-shop committees, chosen by all workers qualified to vote in a shop that is closed against trade-unions and which may or may not have a local plant or corporation organization of the workers. There is a monotonous sameness in the constitutions and by-laws or plans of organizations within each of these three groups. There is in fact little fundamental variation in the published statements of the objects sought and the plans of organization as between group and group. This sameness in descriptive language makes tabulation of the hundreds of shop-committee plans easy and the results of such tabulation perfectly useless or rather utterly misleading. I have therefore made no attempt to enumerate the different kinds of shop committees as to their attitude toward trade-unions. Each plan and even each shop committee must be studied in order to find out just how democratic it is and whether it is working as the employers and managers say it is. The trade-unions, naturally enough, want all shop committees to be tied up to the national craft organizations. The huge majority of employers in this country are, and always have been, opposed to labor organizations. The President's first Industrial Conference came to a deadlock on the question of the right of employees to organize and to choose representatives to deal with the management. The employer group in the conference must be taken as representing the majority of employers the country over. The speeches made by these representative employers were often difficult to understand, but their attitude of mind was never for a moment in doubt. They had been driven by hard experience to abandon individual bargaining with each employee and to accept collective bargaining, but they vigorously maintained their right to dictate the terms of the collective bargain. These employers conceded the right of workers to organize in a given plant and to be represented by representatives chosen from among the employees of that plant, provided the representatives so chosen were agreeable to the management of said plant. The trade-unionists on the other hand insisted upon the right of the workers to choose the representatives whom they thought could best speak for them and make clear their needs and wishes.

It is interesting to note that, respecting labor organization, the position of organized employers and employees is exactly reversed in Great Britain as compared with the United States. We are to-

day exactly where the British were about 30 years ago. The question of national unions versus plant unions was fought out in Great Britain and won by the workers. British employers were obliged to accept the result and bargained collectively with the representatives of the national unions. During the war the workers rebelled against this system, insisting that wages, hours, and shop conditions should be negotiated for each shop by the local shop committees. The employers stood up valiantly for the established order, and insisted that they would have nothing to do with local shop committees, but would bargain collectively only with truly responsible and representative bodies, the executives of the national trade-unions. American employers, equally valiant for the established order, will have nothing to do with irresponsible, unrepresentative, officials of national trade-unions and insist on bargaining collectively with representatives of the workers who know the local situation and who are chosen from the shop where a dispute is pending, provided always that these worker representatives fulfill the employers' ideas of a bona fide representative. One of the biggest questions to be settled is whether employees' representation is to be local and under the direct control and domination of the employer, or whether it is to be nation or world wide and under the control of the workers themselves, or whether the general public will insist on being a party to every collective agreement so as to prevent the employers and the employees from agreeing too agreeably and charging the bill to the ultimate consumer.

As to function, most shop committees deal with grievances, working conditions (i. e., safety, sanitation, and hygiene), wages and hours of labor, and methods of wage payments. Oftentimes a different shop committee is created to deal with each separate function coming under the general head of industrial relations. As to participation in management of industry in the true sense of the term there is as yet practically none in the United States. A great many general managers and directors of personnel say the employees have been taken into partnership and are taking part in the management of the business like true industrial democrats. No doubt these managers and directors honestly think they have achieved industrial democracy, but in the systems of employee representation which I have been able to examine the still small voice of the general manager could be heard very, very distinctly above the roar of the shop committee whirlwind or the crash of the works council earthquake. I do not say that the existing shop committees have done nothing to democratize industry. They have; and they are, in my opinion, to be heartily commended and given every encouragement. As indicated above, a few establishments have progressed to the point where the

employees' voices do have some weight in determining policies and methods and in planning work.

As to the method by which representatives of workers are chosen to the shop committees, there are almost as many different plans as there are different plants having such plans. The plan by which representation or participation of the employees is secured is of little importance compared to the scope of the functions which the committees or representatives of the workers are permitted or are able to exercise.

Experiments in Employees' Management in Great Britain.

A BIGGER question even than that of how collective bargains are to be made and who are to be parties thereto is the question of the scope and content of the collective bargain itself. The radical trade-unionists of Great Britain, and to a much less extent in the United States, are insisting that the workers shall take a larger and larger share in management, until ultimately all or at least the more important industries shall be conducted by the workers. A few interesting experiments in employees' management are already being tried out in Great Britain, for example, the John Dawson works at Newcastle-on-Tyne, under the managership of Mr. Leonard Humphrey. Mr. Humphrey started with nothing and built up a very profitable airplane factory during the war. He is or was, when I interviewed him, the managing director of the John Dawson Co. The company consists of all the employees of the factory. The books of the company are open to the representatives of the employees so that they know at all times the costs of raw materials, machines, tools, and labor, the allowance for depreciation and obsolescence, and the selling price of the finished products. The workers own collectively 50 per cent of the stock of the company; the other 50 per cent is owned by Mr. Humphrey. While the workers can not therefore fire Mr. Humphrey if they should become dissatisfied with him, still they could break up the company. They had no desire to do so when I was in England because they felt that they really were helping to manage a very successful enterprise, and that Mr. Humphrey was the best manager obtainable. During the war Mr. Humphrey paid wages above the scale for all trades employed in the John Dawson factory. The working-day was reduced, if I remember correctly, to 8 hours per day and 44 hours per week. Mr. Humphrey said production per day and per week had increased remarkably, and it was his intention to reduce the working-day to 6 hours. After the signing of the armistice the factory took up the manufacture of high-grade furniture and pianos in addition to the manufacture of airplanes for commercial uses. This factory is one of the few bona fide experiments in industrial democracy.

Several obvious criticisms will at once come into the minds of all. First, John Dawson was a war baby and granting that industrial democracy may be a fine pabulum for war babies, it may disagree with peace babies. This may well be. Many experiments can be safely made with a superprosperous enterprise that would result fatally with a minimum-of-subsistence enterprise. Again, the class of workers attracted by the high wages paid at the John Dawson works was no doubt much above the average. While an industrial democracy might be conducted by these picked, intelligent men it might fail if it fell into the hands of the average workman. If every employer started to John Dawsonize, the result might be industrial chaos as bad or worse than that we experienced as a result of the "cost plus" contracts for making uniforms, and constructing cantonments, ships, factories, and other things.

Workers Desire Real Responsibility in Management.

OF ALL the many hundreds of systems of "industrial democracy" which I have studied very few give promise of accomplishing much in the way of winning the enthusiastic support of the workers, because little, if any, additional authority over or responsibility for methods and results is accorded them. In the great majority of plans, the workers are permitted only to participate in managing, under safeguards and direction or at least suggestion from above, matters of safety, sanitation, benefit funds, and other "welfare" activities. No eager, enthusiastic response from the workers can be expected from such ultra-conservative adventures in industrial radicalism. I do not mean that these plans are, in the great majority of cases, insincere schemes intended to deceive the worker into thinking he is being taken into partnership when he is really only being "taken in." Nothing of the sort. I think employers in general sincerely desire to make concessions to labor. Of course, they want to concede as little as is absolutely necessary to prevent the spread of those radical things with the fearsome Russian names. Perhaps as time goes by the workers will be given the opportunity to demonstrate that they are worthy of greater responsibilities and capable of more constructive contributions to industrial management. None of the shop committees and works councils have been operating long enough to warrant generalizations about future developments. As a worker and a student I feel that there is a tremendous latent creative force in the workers of to-day, which is not being utilized at all. This force may be likened to the force of the waves and the tides of the ocean. No engineer has as yet been able to devise a practical method for utilizing the giant strength of the sea; but every industrial engineer with any imagination whatsoever dreams

of the day when this giant will be harnessed and made to do the work of the world. Perhaps it is not and never will be economically feasible to harness the sea. It is likewise possible that human nature is fundamentally so constituted that it never will be practicable to utilize the good will, enthusiasm, and creative power of the workers—to substitute leadership for drivership in industry. It may be that industrial peace on earth is unattainable, and that industrial war is the natural state of man; but I do not believe it. Anyhow, it is worth a thorough trial in order to find out whether the workers, if given responsibility in industrial management, will become so interested in their work that they won't have time to be restless.

During and immediately after the war, employers were alarmed at the thought of the power of the radical labor movement. The collapse of the railway strike in Great Britain and the failure of the British miners to win out on the nationalization of the coal mines have greatly cheered employers everywhere. The relative industrial calm in France, Belgium, and Germany also has had a marked effect. In our own country the longshoremen's strike, the printers' strike, the steel workers' strike, and the coal miners' strike have greatly weakened the influence of the radical laborite and socialist leaders, while they certainly have not strengthened the conservative trade-unionists. I think it is perfectly obvious that the wild stampede on the part of employers to set up "shop committees" and "works councils" and to proclaim the dawn of the new day of "industrial democracy" is over. From now on few new plans will be set up. Probably many plans already created will be abandoned or allowed to perish by atrophy. The sincere attempts to enlist the sympathy and help of the workers in bringing about industrial peace, however, will continue and will be gradually perfected.

I am not much interested in the possibility of the workers owning, managing, and operating all industries or even the more important ones. At the present moment we are not in sight of that consummation. It must be conceded that the worker who has served long enough in a plant to have acquired a special skill in doing his work, even if it is only shoveling slag or wheeling a barrow, has invested something in that industry and that plant, and that he has thereby acquired a right to have his views as to the conditions surrounding his job considered by the management. A means should be provided whereby he may present any grievance or any suggestion he may have to make to somebody representing the management. He may get turned down. None of us ever gets all he wants or asks for. But every worker ought to have the right to give his views on industrial matters just as he has the right to express his views on

political or religious matters. The workers will not be satisfied merely to express views. They want the assurance that their views will be given more than a perfunctory consideration. No class of people is more responsive to fair, open-handed dealing than the workers. If their proposals are discussed openly with them and shown to be impracticable, or inexpedient for the time, they have almost invariably been quite ready to vote for the rejection of their own proposals.

There is a vast gulf fixed between expressing an opinion about the shape of the handle of the shovel one uses for heaving slag or the desirability of having a glee club rather than a debating society; and the planning and routing of work, devising methods and determining upon the tools, machines, and processes for making the finished product in a big plant. I insist that the management, even scientific management, has not a monopoly of all the brains in an establishment. The workers themselves can and do contribute much in the planning and doing of the work. What is of vastly more importance than the increase in production as a result of utilizing the latent intelligence, ingenuity, and enthusiasm of the workers, is the increase in contentment. Here is a vast source of industrial power which has been cut off, isolated, by the transformation of little business into big business. It will be difficult to tap this source, but tap it we must if we are to continue anything resembling the present industrial organization with its large scale production. The good will of the workers is a much more potent force making for industrial efficiency than all the scientific management formulas and systems of production. There is no inherent reason why the good will of the workers should not go hand in hand with scientific management. Until now the workers have had only antagonism for scientific management because the scientific manager never asked them for their opinions or ideas—he only told them what they were expected to do and the workers promptly did something else. I have already said workers are not different from employers. That is precisely what ails them. If employers will deal fairly and squarely with their employees, let them know all about the business except only those technical processes which must be kept secret, and take them into a real partnership production will be enormously improved both in quantity and quality. This may be just another way of saying that when the millennium comes there will be no industrial unrest, for there will be no industry no employers and no employees. Before abandoning ourselves completely to pessimism and despair we should at least try the experiment of giving the workers a real voice and responsibility in management.

Workers Interested in Distribution and Consumption of Product.

IN ALL discussions of employees' representation too much emphasis is placed on production and not enough on distribution and consumption of the product. The interest of the worker in increasing production is bound to wane, no matter how many representatives he may have on shop committees and works councils, no matter how much dependence is placed upon him in planning and carrying out his work, if in the division of the product he does not get or believes he does not get his fair share. The share due to labor as a whole and to each individual laborer is impossible of exact determination. The concept of economic law as a force, as compelling, as universal, as immutable, and as unerring as the law of gravitation is beautiful, but it doesn't get us anywhere. If there is an economic law working uninterruptedly to adjust the economic reward of each member of society in accordance with his economic merit, or, in other words, in proportion to his contribution to the economic product, it remains hidden beyond the ken of the labor statistician and administrator. Practically the share of labor is determined by the bargaining strength of the workers.

Of course, if the workers are to be admitted to participation in management, they must participate to some extent in the losses as well as the gains of industry. A practical method of payment would be to guarantee for each position a minimum wage which must be paid regardless of any losses which the business may suffer. In addition to the minimum, a bonus should be provided varying according to the contribution of the workers in cutting down labor costs, in reducing costs of management, in decreasing spoilage of material, in decreasing wear and tear on machines and tools, in improving quality of product, in increasing business, or in any other way. This would obviate the objection to most bonus schemes that the worker is penalized or rewarded for the inefficiency or the good judgment of the managers.

Democracy, if it is not to perish from the earth, must be organized for efficiency. It must become far more efficient than it ever has been at any time in the past. We are told that democracy has just won a tremendous victory over autocracy. Our rejoicings must be tempered by the remembrance of the awful cost of the victory in lives shattered and snuffed out, in wealth squandered and destroyed, in the chaos which has been unloosed on the earth. When we count up the costs we do not feel too confident of the fullness of this victory nor too secure in its beneficent results. The victors suffered far greater losses both in men and in material wealth than the vanquished. Democracy won by sheer weight of numbers and of wealth.

Had not autocracy been divided against itself it could not have been overthrown by the partial and inefficient democracies which opposed it. In order to win, democracy was driven to adopt autocratic methods and practices—methods and practices which still persist and fill democrats with apprehension. A speedy readjustment, political and industrial, on a more democratic basis is necessary. The few feeble, tottering steps which we have taken on the road toward democracy, both political and industrial, will not and can not be retraced. The evils, shortcomings, and imperfections of our present democracy can not be eradicated by reverting to autocracy which we have in part shaken off. The cure for democracy is more, not less, democracy.

Draft Conventions Adopted by International Labor Conference.

A FULL account of the proceedings of the International Labor Conference held in Washington, D. C., October 29 to November 29, 1919, was given in the January issue of the MONTHLY LABOR REVIEW. The references therein to the draft conventions and recommendations adopted by the conference were brief, the purpose being merely to record the action of the conference and the accompanying discussions, leaving for later publication the full text of the conventions as finally revised and adopted. The following is an official copy of the text of the conventions relating to the eight-hour day, unemployment, employment of women before and after childbirth, employment of women during the night, minimum age for admission of children to industrial employments, and night work of young persons employed in industry; and recommendations concerning unemployment, reciprocity of treatment of foreign workers, prevention of anthrax, protection of women and children against lead poisoning, the establishment of Government health services, and the application of the Bern convention of 1906 on the prohibition of the use of white phosphorus in the manufacture of matches.

Draft Conventions Adopted.

The Eight-hour Day.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America, on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to the "application of principle of the 8-hour day or of the 48-hour week," which is the first item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a draft international convention, adopts the following draft convention for ratification by the members of the International Labor Organization in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

ARTICLE 1. For the purpose of this convention, the term "industrial undertaking" includes particularly:

(a) Mines, quarries, and other works for the extraction of minerals from the earth.

(b) Industries in which articles are manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up or demolished, or in

which materials are transformed; including shipbuilding and the generation, transformation, and transmission of electricity or motive power of any kind.

(c) Construction, reconstruction, maintenance, repair, alteration, or demolition of any building, railway, tramway, harbor, dock, pier, canal, inland waterway, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic or telephonic installation, electrical undertaking, gas work, waterwork or other work of construction, as well as the preparation for or laying the foundations of any such work or structure.

(d) Transport of passengers or goods by road, rail, sea or inland waterway, including the handling of goods at docks, quays, wharves or warehouses, but excluding transport by hand.

The provisions relative to transport by sea and on inland waterways shall be determined by a special conference dealing with employment at sea and on inland waterways.

The competent authority in each country shall define the line of division which separates industry from commerce and agriculture.

ART. 2. The working hours of persons employed in any public or private industrial undertaking or in any branch thereof, other than an undertaking in which only members of the same family are employed, shall not exceed 8 in the same day and 48 in the week, with the exceptions hereinafter provided for.

(a) The provisions of this convention shall not apply to persons holding positions of supervision or management, nor to persons employed in a confidential capacity.

(b) Where by law, custom, or agreement between employers' and workers' organizations, or where no such organizations exist between employers' and workers' representatives, the hours of work on one or more days of the week are less than eight, the limit of eight hours may be exceeded on the remaining days of the week by the sanction of the competent public authority, or by agreement between such organizations or representatives: *Provided, however,* That in no case under the provisions of this paragraph shall the daily limit of eight hours be exceeded by more than one hour.

(c) Where persons are employed in shifts it shall be permissible to employ persons in excess of 8 hours in any one day and 48 hours in any one week, if the average number of hours over a period of 3 weeks or less does not exceed 8 per day and 48 per week.

ART. 3. The limit of hours of work prescribed in article 2 may be exceeded in case of accident, actual or threatened, or in case of urgent work to be done to machinery or plant, or in case of "force majeure," but only so far as may be necessary to avoid serious interference with the ordinary working of the undertaking.

ART. 4. The limit of hours of work prescribed in article 2 may also be exceeded in those processes which are required by reason of the nature of the process to be carried on continuously by a succession of shifts, subject to the condition that the working hours shall not exceed 56 in the week on the average. Such regulation of the hours of work shall in no case affect any rest days which may be secured by the national law to the workers in such processes in compensation for the weekly rest day.

ART. 5. In exceptional cases where it is recognized that the provisions of article 2 can not be applied, but only in such cases, agreements between workers' and employers' organizations concerning the daily limit of work over a longer period of time, may be given the force of regulations, if the Government, to which these agreements shall be submitted, so decides. The average number of hours worked per week, over the number of weeks covered by any such agreement, shall not exceed 48.

ART. 6. Regulations made by public authority shall determine for industrial undertakings:

(a) The permanent exceptions that may be allowed in preparatory or complementary work which must necessarily be carried on outside the limits laid down for the general working of an establishment, or for certain classes of workers whose work is essentially intermittent.

(b) The temporary exceptions that may be allowed, so that establishments may deal with exceptional cases of pressure of work.

These regulations shall be made only after consultation with the organizations of employers and workers concerned, if any such organizations exist. These regulations shall fix the maximum of additional hours in each instance, and the rate of pay for overtime shall not be less than one and one-quarter times the regular rate.

ART. 7. Each Government shall communicate to the International Labor Office:

(a) A list of the processes which are classed as being necessarily continuous in character under article 4;

(b) Full information as to working of the agreements mentioned in article 5; and

(c) Full information concerning the regulations made under article 6 and their application.

The International Labor Office shall make an annual report thereon to the General Conference of the International Labor Organization.

ART. 8. In order to facilitate the enforcement of the provisions of this convention, every employer shall be required:

(a) To notify by means of the posting of notices in conspicuous places in the works or other suitable place, or by such other method as may be approved by the Government, the hours at which work begins and ends, and where work is carried on by shifts the hours at which each shift begins and ends. These hours shall be so fixed that the duration of the work shall not exceed the limits prescribed by this convention, and when so notified they shall not be changed except with such notice and in such manner as may be approved by the Government.

(b) To notify in the same way such rest intervals accorded during the period of work as are not reckoned as part of the working hours.

(c) To keep a record in the form prescribed by law or regulation in each country of all additional hours worked in pursuance of articles 3 and 6 of this convention.

It shall be made an offense against the law to employ any person outside the hours fixed in accordance with paragraph (a), or during the intervals fixed in accordance with paragraph (b).

ART. 9. In the application of this convention to Japan the following modifications and conditions shall obtain:

(a) The term "industrial undertaking" includes particularly—

The undertakings enumerated in paragraph (a) of article 1;

The undertakings enumerated in paragraph (b) of article 1, provided there are at least ten workers employed;

The undertakings enumerated in paragraph (c) of article 1, in so far as these undertakings shall be defined as "factories" by the competent authority;

The undertakings enumerated in paragraph (d) of article 1, except transport of passengers or goods by road, handling of goods at docks, quays, wharves, and warehouses, and transport by hand; and,

Regardless of the number of persons employed, such of the undertakings enumerated in paragraphs (b) and (c) of article 1 as may be declared by the competent authority either to be highly dangerous or to involve unhealthful processes.

(b) The actual working hours of persons of 15 years of age or over in any public or private industrial undertaking, or in any branch thereof, shall not exceed 57 in the week, except that in the raw-silk industry the limit may be 60 hours in the week.

(c) The actual working hours of persons under 15 years of age in any public or private industrial undertaking, or in any branch thereof, and of all miners of whatever age engaged in underground work in the mines, shall in no case exceed 48 in the week.

(d) The limit of hours of work may be modified under the conditions provided for in articles 2, 3, 4, and 5 of this convention, but in no case shall the length of such modification bear to the length of the basic week a proportion greater than that which obtains in those articles.

(e) A weekly rest period of 24 consecutive hours shall be allowed to all classes of workers.

(f) The provision in Japanese factory legislation limiting its application to places employing 15 or more persons shall be amended so that such legislation shall apply to places employing 10 or more persons.

(g) The provisions of the above paragraphs of this article shall be brought into operation not later than July 1, 1922, except that the provisions of article 4 as modified by paragraph (d) of this article shall be brought into operation not later than July 1, 1923.

(h) The age of 15 prescribed in paragraph (c) of this article shall be raised, not later than July 1, 1925, to 16.

ART. 10. In British India the principle of a 60-hour week shall be adopted for all workers in the industries at present covered by the factory acts administered by the Government of India, in mines, and in such branches of railway work as shall be specified for this purpose by the competent authority. Any modification of this limitation made by the competent authority shall be subject to the provisions of articles 6 and 7 of this convention. In other respects the provisions of this convention shall not apply to India, but further provisions limiting the hours of work in India shall be considered at a future meeting of the General Conference.

ART. 11. The provisions of this convention shall not apply to China, Persia, and Siam, but provisions limiting the hours of work in these countries shall be considered at a future meeting of the General Conference.

ART. 12. In the application of this convention to Greece, the date at which its provisions shall be brought into operation in accordance with article 19 may be extended to not later than July 1, 1923, in the case of the following industrial undertakings:

1. Carbon-bisulphide works,
2. Acids works,
3. Tanneries,
4. Paper mills,
5. Printing works,
6. Sawmills,
7. Warehouses for the handling and preparation of tobacco,
8. Surface mining,
9. Foundries,
10. Lime works,

11. Dye works,
12. Glassworks (blowers),
13. Gas works (firemen),
14. Loading and unloading merchandise;

and to not later than July 1, 1924, in the case of the following industrial undertakings:

1. Mechanical industries: Machine shops for engines, safes, scales, beds, tacks, shells (sporting), iron foundries, bronze foundries, tin shops, plating shops, manufactories of hydraulic apparatus.

2. Constructional industries: Lime-kilns, cement works, plasterers' shops, tile yards, manufactories of bricks and pavements, potteries, marble yards, excavating and building work.

3. Textile industries: Spinning and weaving mills of all kinds, except dye works.

4. Food industries: Flour and grist mills, bakeries, macaroni factories, manufactories of wines, alcohol, and drinks, oil works, breweries, manufactories of ice and carbonated drinks, manufactories of confectioners' products and chocolate, manufactories of sausages and preserves, slaughterhouses, and butcher shops.

5. Chemical industries: Manufactories of synthetic colors, glassworks (except the blowers), manufactories of essence of turpentine and tartar, manufactories of oxygen and pharmaceutical products, manufactories of flaxseed oil, manufactories of glycerine, manufactories of calcium carbide, gas works (except the firemen).

6. Leather industries: Shoe factories, manufactories of leather goods.

7. Paper and printing industries: Manufactories of envelopes, record books, boxes, bags, bookbinding, lithographing, and zinc-engraving shops.

8. Clothing industries: Clothing shops, underwear and trimmings, workshops for pressing, workshops for bed coverings, artificial flowers, feathers, and trimmings, hat and umbrella factories.

9. Woodworking industries: Joiners' shops, coopers' sheds, wagon factories, manufactories of furniture and chairs, picture-framing establishments, brush and broom factories.

10. Electrical industries: Power houses, shops for electrical installations.

11. Transportation by land: Employees on railroads and street cars, firemen, drivers, and carters.

ART. 13. In the application of this convention to Roumania the date at which its provisions shall be brought into operation in accordance with article 19 may be extended to not later than July 1, 1924.

ART. 14. The operation of the provisions of this convention may be suspended in any country by the Government in the event of war or other emergency endangering the national safety.

ART. 15. The formal ratifications of this convention, under the conditions set forth in Part XIII of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919, shall be communicated to the secretary general of the League of Nations for registration.

ART. 16. Each member which ratifies this convention engages to apply it to its colonies, protectorates and possessions which are not fully self-governing:

(a) Except where owing to the local conditions its provisions are inapplicable; or

(b) Subject to such modifications as may be necessary to adapt its provisions to local conditions.

Each member shall notify to the International Labor Office the action taken in respect of each of its colonies, protectorates, and possessions which are not fully self-governing.

ART. 17. As soon as the ratifications of two members of the International Labor Organization have been registered with the secretariat, the secretary general of the League of Nations shall so notify all the members of the International Labor Organization.

ART. 18. This convention shall come into force at the date on which such notification is issued by the secretary general of the League of Nations, and it shall then be binding only upon those members which have registered their ratification with the secretariat. Thereafter this convention will come into force for any other member at the date on which its ratification is registered with the secretariat.

ART. 19. Each member which ratifies this convention agrees to bring its provisions into operation not later than July 1, 1921, and to take such action as may be necessary to make these provisions effective.

ART. 20. A member which has ratified this convention may denounce it after the expiration of 10 years from the date on which the convention first comes into force, by an act communicated to the secretary general of the League of Nations for registration. Such denunciation shall not take effect until one year after the date on which it is registered with the secretariat.

ART. 21. At least once in 10 years the governing body of the International Labor Office shall present to the general conference a report on the working of this convention, and shall consider the desirability of placing on the agenda of the conference the question of its revision or modification.

ART. 22. The French and English texts of this convention shall both be authentic.

Unemployment.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America, on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to the "question of preventing or providing against unemployment," which is the second item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a draft international convention, adopts the following draft convention for ratification by the members of the International Labor Organization, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

ARTICLE 1. Each member which ratifies this convention shall communicate to the International Labor Office, at intervals as short as possible and not exceeding three months, all available information, statistical or otherwise, concerning unemployment, including reports on measures taken or contemplated to combat unemployment. Whenever practicable, the information shall be made available for such communication not later than three months after the end of the period to which it relates.

ART. 2. Each member which ratifies this convention shall establish a system of free public employment agencies under the control of a central authority. Committees, which shall include representatives of employers and of workers, shall be appointed to advise on matters concerning the carrying on of these agencies.

Where both public and private free employment agencies exist, steps shall be taken to coordinate the operations of such agencies on a national scale.

The operations of the various national systems shall be coordinated by the International Labor Office in agreement with the countries concerned.

ART. 3. The members of the International Labor Organization which ratify this convention and which have established systems of insurance against unemployment shall, upon terms being agreed between the members concerned, make arrangements whereby workers belonging to one member and working in the territory of another shall be admitted to the same rates of benefit of such insurance as those which obtain for the workers belonging to the latter.

ART. 4. The formal ratifications of this convention, under the conditions set forth in Part XIII of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919, shall be communicated to the secretary general of the League of Nations for registration.

ART. 5. Each member which ratifies this convention engages to apply it to its colonies, protectorates and possessions which are not fully self-governing:

(a) Except where owing to the local conditions its provisions are inapplicable; or

(b) Subject to such modifications as may be necessary to adapt its provisions to local conditions.

Each member shall notify to the International Labor Office the action taken in respect of each of its colonies, protectorates and possessions which are not fully self-governing.

ART. 6. As soon as the ratifications of three members of the International Labor Organization have been registered with the secretariat, the Secretary General of the League of Nations shall so notify all the members of the International Labor Organization.

ART. 7. This convention shall come into force at the date on which such notification is issued by the secretary general of the League of Nations, but it shall then be binding only upon those members which have registered their ratifications with the secretariat. Thereafter this convention will come into force for any other member at the date on which its ratification is registered with the secretariat.

ART. 8. Each member which ratifies this convention agrees to bring its provisions into operation not later than July 1, 1921, and to take such action as may be necessary to make these provisions effective.

ART. 9. A member which has ratified this convention may denounce it after the expiration of 10 years from the date on which the convention first comes into force, by an act communicated to the secretary general of the League of Nations for registration. Such denunciation shall not take effect until one year after the date on which it is registered with the secretariat.

ART. 10. At least once in 10 years the governing body of the International Labor Office shall present to the general conference a report on the working of this convention, and shall consider the desirability of placing on the agenda of the conference the question of its revision or modification.

ART. 11. The French and English texts of this convention shall both be authentic.

Employment of Women Before and After Childbirth.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America on the 29th day of October, 1919, and having decided

upon the adoption of certain proposals with regard to "women's employment, before and after childbirth, including the question of maternity benefit," which is part of the third item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a draft international convention, adopts the following draft convention for ratification by the members of the International Labor Organization, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

ARTICLE 1. For the purpose of this convention, the term "industrial undertaking" includes particularly:

(a) Mines, quarries, and other works for the extraction of minerals from the earth.

(b) Industries in which articles are manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up or demolished, or in which materials are transformed; including shipbuilding, and the generation, transformation, and transmission of electricity or motive power of any kind.

(c) Construction, reconstruction, maintenance, repair, alteration, or demolition of any building, railway, tramway, harbor, dock, pier, canal, inland waterway, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic or telephonic installation, electrical undertaking, gas work, waterwork, or other work of construction, as well as the preparation for or laying the foundation of any such work or structure.

(d) Transport of passengers or goods by road, rail, sea, or inland waterway, including the handling of goods at docks, quays, wharves, and warehouses, but excluding transport by hand.

For the purpose of this convention, the term "commercial undertaking" includes any place where articles are sold or where commerce is carried on.

The competent authority in each country shall define the line of division which separates industry and commerce from agriculture.

ART. 2. For the purpose of this convention, the term "woman" signifies any female person, irrespective of age or nationality, whether married or unmarried, and the term "child" signifies any child, whether legitimate or illegitimate.

ART. 3. In any public or private industrial or commercial undertaking, or in any branch thereof, other than an undertaking in which only members of the same family are employed, a woman—

(a) Shall not be permitted to work during the six weeks following her confinement.

(b) Shall have the right to leave her work if she produces a medical certificate stating that her confinement will probably take place within six weeks.

(c) Shall, while she is absent from her work in pursuance of paragraphs (a) and (b), be paid benefits sufficient for the full and healthy maintenance of herself and her child, provided either out of public funds or by means of a system of insurance, the exact amount of which shall be determined by the competent authority in each country, and as an additional benefit shall be entitled to free attendance by a doctor or certified midwife. No mistake of the medical adviser in estimating the date of confinement shall preclude a woman from receiving these benefits from the date of the medical certificate up to the date on which the confinement actually takes place.

(d) Shall in any case, if she is nursing her child, be allowed half an hour twice a day during her working hours for this purpose.

ART. 4. Where a woman is absent from her work in accordance with paragraphs (a) or (b) of article 3 of this convention, or remains absent from her

work for a longer period as a result of illness medically certified to arise out of pregnancy or confinement and rendering her unfit for work, it shall not be lawful, until her absence shall have exceeded a maximum period to be fixed by the competent authority in each country, for her employer to give her notice of dismissal during such absence, nor to give her notice of dismissal at such a time that the notice would expire during such absence.

ART. 5. The formal ratifications of this convention, under the conditions set forth in Part XIII of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919, shall be communicated to the secretary general of the League of Nations for registration.

ART. 6. Each member which ratifies this convention engages to apply it to its colonies, protectorates, and possessions which are not fully self-governing:

(a) Except where, owing to the local conditions, its provisions are inapplicable; or

(b) Subject to such modifications as may be necessary to adapt its provisions to local conditions.

Each member shall notify to the International Labor Office the action taken in respect of each of its colonies, protectorates, and possessions which are not fully self-governing.

ART. 7. As soon as the ratifications of two members of the International Labor Organization have been registered with the secretariat, the secretary general of the League of Nations shall so notify all the members of the International Labor Organization.

ART. 8. This convention shall come into force at the date on which such notification is issued by the secretary general of the League of Nations, but it shall then be binding only upon those members which have registered their ratifications with the secretariat. Thereafter this convention will come into force for any other member at the date on which its ratification is registered with the secretariat.

ART. 9. Each member which ratifies this convention agrees to bring its provisions into operation not later than July 1, 1922, and to take such action as may be necessary to make these provisions effective.

ART. 10. A member which has ratified this convention may denounce it after the expiration of 10 years from the date on which the convention first comes into force, by an act communicated to the secretary general of the League of Nations for registration. Such denunciation shall not take effect until one year after the date on which it is registered with the secretariat.

ART. 11. At least once in 10 years the governing body of the International Labor Office shall present to the general conference a report on the working of this convention, and shall consider the desirability of placing on the agenda of the conference the question of its revision or modification.

ART. 12. The French and English texts of this convention shall both be authentic.

Employment of Women During the Night.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America, on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to "women's employment: during the night," which is part of the third item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a draft international convention, adopts the following draft convention for ratification by the members of the International Labor Organization,

in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

ARTICLE 1. For the purpose of this convention, the term "industrial undertaking" includes particularly:

(a) Mines, quarries, and other works for the extraction of minerals from the earth;

(b) Industries in which articles are manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up or demolished, or in which materials are transformed; including shipbuilding, and the generation, transformation, and transmission of electricity or motive power of any kind;

(c) Construction, reconstruction, maintenance, repair, alteration, or demolition of any building, railway, tramway, harbor, dock, pier, canal, inland waterway, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic or telephonic installation, electrical undertaking, gas work, waterwork, or other work of construction, as well as the preparation for or laying the foundations of any such work or structure.

The competent authority in each country shall define the line of division which separates industry from commerce and agriculture.

ART. 2. For the purpose of this convention, the term "night" signifies a period of at least 11 consecutive hours, including the interval between 10 o'clock in the evening and 5 o'clock in the morning.

In those countries where no Government regulation as yet applies to the employment of women in industrial undertakings during the night, the term "night" may provisionally, and for a maximum period of 3 years, be declared by the Government to signify a period of only 10 hours, including the interval between 10 o'clock in the evening and 5 o'clock in the morning.

ART. 3. Women without distinction of age shall not be employed during the night in any public or private industrial undertaking, or in any branch thereof, other than an undertaking in which only members of the same family are employed.

ART. 4. Article 3 shall not apply:

(a) In cases of force majeure, when in any undertaking there occurs an interruption of work which it was impossible to foresee, and which is not of a recurring character.

(b) In cases where the work has to do with raw materials or materials in course of treatment which are subject to rapid deterioration, when such night work is necessary to preserve the said materials from certain loss.

ART. 5. In India and Siam, the application of article 3 of this convention may be suspended by the Government in respect to any industrial undertaking, except factories as defined by the national law. Notice of every such suspension shall be filed with the International Labor Office.

ART. 6. In industrial undertakings which are influenced by the seasons and in all cases where exceptional circumstances demand it, the night period may be reduced to 10 hours on 60 days of the year.

ART. 7. In countries where the climate renders work by day particularly trying to the health, the night period may be shorter than prescribed in the above articles, provided that compensatory rest is accorded during the day.

ART. 8. The formal ratifications of this convention, under the conditions set forth in Part XIII of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919, shall be communicated to the secretary general of the League of Nations for registration.

ART. 9. Each member which ratifies this convention engages to apply it to its colonies, protectorates and possessions which are not fully self-governing:

(a) Except where owing to the local conditions its provisions are inapplicable; or

(b) Subject to such modifications as may be necessary to adapt its provisions to local conditions.

Each member shall notify to the International Labor Office the action taken in respect of each of its colonies, protectorates and possessions which are not fully self-governing.

ART. 10. As soon as the ratifications of two members of the International Labor Organization have been registered with the secretariat, the secretary general of the League of Nations shall so notify all the members of the International Labor Organization.

ART. 11. This convention shall come into force at the date on which such notification is issued by the secretary general of the League of Nations, but it shall then be binding only upon those members which have registered their ratifications with the secretariat. Thereafter this convention will come into force for any other member at the date on which its ratification is registered with the secretariat.

ART. 12. Each member which ratifies this convention agrees to bring its provisions into operation not later than July 1, 1922, and to take such action as may be necessary to make these provisions effective.

ART. 13. A member which has ratified this convention may denounce it after the expiration of 10 years from the date on which the convention first comes into force, by an act communicated to the secretary general of the League of Nations for registration. Such denunciation shall not take effect until one year after the date on which it is registered with the secretariat.

ART. 14. At least once in 10 years, the governing body of the International Labor Office shall present to the general conference a report on the working of this convention, and shall consider the desirability of placing on the agenda of the conference the question of its revision or modification.

ART. 15. The French and English texts of this convention shall both be authentic.

Minimum Age for Admission of Children to Industrial Employment.

The general conference of the International Labor Organization of the League of Nations, having been convened by the Government of the United States of America at Washington, on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to the "employment of children: minimum age of employment," which is part of the fourth item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a draft international convention, adopts the following draft convention for ratification by the members of the International Labor Organization, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

ARTICLE 1. For the purpose of this convention, the term "industrial undertaking" includes particularly:

(a) Mines, quarries, and other works for the extraction of minerals from the earth.

(b) Industries in which articles are manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up or demolished, or in which materials are transformed; including shipbuilding, and the generation, transformation, and transmission of electricity and motive power of any kind.

(c) Construction, reconstruction, maintenance, repair, alteration, or demolition of any building, railway, tramway, harbor, dock, pier, canal, inland waterway, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic or telephonic installation, electrical undertaking, gas work, water work, or other work of construction, as well as the preparation for or laying the foundations of any such work or structure.

(d) Transport of passengers or goods by road or rail or inland waterway, including the handling of goods at docks, quays, wharves, and warehouses, but excluding transport by hand.

The competent authority in each country shall define the line of division which separates industry from commerce and agriculture.

ART. 2. Children under the age of 14 years shall not be employed or work in any public or private industrial undertaking, or in any branch thereof other than an undertaking in which only members of the same family are employed.

ART. 3. The provisions of article 2 shall not apply to work done by children in technical schools, provided that such work is approved and supervised by public authority.

ART. 4. In order to facilitate the enforcement of the provisions of this convention, every employer in an industrial undertaking shall be required to keep a register of all persons under the age of 16 years employed by him, and of the dates of their births.

ART. 5. In connection with the application of this convention to Japan, the following modifications of article 2 may be made:

(a) Children over 12 years of age may be admitted into employment if they have finished the course in the elementary school;

(b) As regards children between the ages of 12 and 14 already employed, transitional regulations may be made.

The provision in the present Japanese law admitting children under the age of 12 years to certain light and easy employments shall be repealed.

ART. 6. The provisions of article 2 shall not apply to India, but in India children under 12 years of age shall not be employed—

(a) In manufactories working with power and employing more than 10 persons;

(b) In mines, quarries, and other works for the extraction of minerals from the earth;

(c) In the transport of passengers or goods, or mails, by rail, or in the handling of goods at docks, quays, and wharves, but excluding transport by hand.

ART. 7. The formal ratifications of this convention, under the conditions set forth in Part XIII of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919, shall be communicated to the secretary general of the League of Nations for registration.

ART. 8. Each member which ratifies this convention engages to apply it to its colonies, protectorates, and possessions which are not fully self-governing:

(a) Except where owing to the local conditions its provisions are inapplicable; or

(b) Subject to such modifications as may be necessary to adapt its provisions to local conditions.

Each member shall notify to the International Labor Office the action taken in respect to each of its colonies, protectorates, and possessions which are not fully self-governing.

ART. 9. As soon as the ratifications of two members of the International Labor Organization have been registered with the secretariat, the secretary

general of the League of Nations shall so notify all the members of the International Labor Organization.

ART. 10. This convention shall come into force at the date on which such notification is issued by the secretary general of the League of Nations, but it shall then be binding only upon those members which have registered their ratifications with the secretariat. Thereafter this convention will come into force for any other member at the date on which its ratification is registered with the secretariat.

ART. 11. Each member which ratifies this convention agrees to bring its provisions into operation not later than July 1, 1922, and to take such action as may be necessary to make these provisions effective.

ART. 12. A member which has ratified this convention may denounce it after the expiration of 10 years from the date on which the convention first comes into force, by an act communicated to the secretary general of the League of Nations for registration. Such denunciation shall not take effect until one year after the date on which it is registered with the secretariat.

ART. 13. At least once in 10 years, the governing body of the International Labor Office shall present to the general conference a report on the working of this convention, and shall consider the desirability of placing on the agenda of the conference the question of its revision or modification.

ART. 14. The French and English texts of this convention shall both be authentic.

Night Work of Young Persons Employed in Industry.

The general conference of the International Labor Organization of the League of Nations, having been convened by the Government of the United States of America at Washington, on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to the "employment of children during the night," which is part of the fourth item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a draft international convention, adopts the following draft convention for ratification by the members of the International Labor Organization, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

ARTICLE 1. For the purpose of this convention, the term "industrial undertaking" includes particularly:

(a) Mines, quarries, and other works for the extraction of minerals from the earth.

(b) Industries in which articles are manufactured, altered, cleaned, repaired, ornamented, finished, adapted for sale, broken up, or demolished, or in which materials are transformed; including shipbuilding, and the generation, transformation, and transmission of electricity or motive power of any kind.

(c) Construction, reconstruction, maintenance, repair, alteration, or demolition of any building, railway, tramway, harbor, dock, pier, canal, inland waterway, road, tunnel, bridge, viaduct, sewer, drain, well, telegraphic or telephonic installation, electrical undertaking, gas work, waterwork, or other work of construction as well as the preparation for or laying the foundations of any such work or structure.

(d) Transport of passengers or goods by road or rail, including the handling of goods at docks, quays, wharves, and warehouses, but excluding transport by hand.

The competent authority in each country shall define the line of division which separates industry from commerce and agriculture.

ART. 2. Young persons under 18 years of age shall not be employed during the night in any public or private industrial undertaking, or in any branch thereof, other than an undertaking in which only members of the same family are employed, except as hereinafter provided for.

Young persons over the age of 16 may be employed during the night in the following industrial undertakings on work which, by reason of the nature of the process, is required to be carried on continuously day and night:

(a) Manufacture of iron and steel; processes in which reverberatory or regenerative furnaces are used, and galvanizing of sheet metal or wire (except the pickling process).

(b) Glass works.

(c) Manufacture of paper.

(d) Manufacture of raw sugar.

(e) Gold mining reduction work.

ART. 3. For the purpose of this convention, the term "night" signifies a period of at least 11 consecutive hours, including the interval between 10 o'clock in the evening and 5 o'clock in the morning.

In coal and lignite mines work may be carried on in the interval between 10 o'clock in the evening and 5 o'clock in the morning, if an interval of ordinarily 15 hours, and in no case of less than 13 hours, separates two periods of work.

Where night work in the baking industry is prohibited for all workers, the interval between 9 o'clock in the evening and 4 o'clock in the morning may be substituted in the baking industry for the interval between 10 o'clock in the evening and 5 o'clock in the morning.

In those tropical countries in which work is suspended during the middle of the day, the night period may be shorter than 11 hours if compensatory rest is accorded during the day.

ART. 4. The provisions of articles 2 and 3 shall not apply to the night work of young persons between the ages of 16 and 18 years in cases of emergencies which could not have been controlled or foreseen, which are not of a periodical character, and which interfere with the normal working of the industrial undertaking.

ART. 5. In the application of this convention to Japan, until July 1, 1925, article 2 shall apply only to young persons under 15 years of age, and thereafter it shall apply only to young persons under 16 years of age.

ART. 6. In the application of this convention to India, the term "industrial undertakings" shall include only "factories" as defined in the Indian factory act, and article 2 shall not apply to male young persons over 14 years of age.

ART. 7. The prohibition of night work may be suspended by the Government, for young persons between the ages of 16 and 18 years, when in case of serious emergency the public interest demands it.

ART. 8. The formal ratifications of this convention, under the conditions set forth in Part XIII of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919, shall be communicated to the secretary general of the League of Nations for registration.

ART. 9. Each member which ratifies this convention engages to apply it to its colonies, protectorates, and possessions which are not fully self-governing:

(a) Except where, owing to the local conditions, its provisions are inapplicable; or

(b) Subject to such modifications as may be necessary to adapt its provisions to local conditions.

Each member shall notify to the International Labor Office the action taken in respect of each of its colonies, protectorates, and possessions which are not fully self-governing.

ART. 10. As soon as the ratification of two members of the International Labor Organization have been registered with the secretariat the secretary general of the League of Nations shall so notify all the members of the International Labor Organization.

ART. 11. This convention shall come into force at the date on which such notification is issued by the secretary general of the League of Nations, and it shall then be binding only upon those members which have registered their ratifications with the secretariat. Thereafter this convention will come into force for any other member at the date on which its ratification is registered with the secretariat.

ART. 12. Each member which ratifies this convention agrees to bring its provisions into operation not later than July 1, 1922, and to take such action as may be necessary to make these provisions effective.

ART. 13. A member which has ratified this convention may denounce it after the expiration of ten years from the date on which the convention first comes into force, by an act communicated to the secretary general of the League of Nations for registration. Such denunciation shall not take effect until one year after the date on which it is registered with the secretariat.

ART. 14. At least once in 10 years the governing body of the International Labor Office shall present to the General Conference a report on the working of this convention, and shall consider the desirability of placing on the agenda of the conference the question of its revision or modification.

ART. 15. The French and English texts of this convention shall both be authentic.

Recommendations Adopted.

Unemployment.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to the "question of preventing or providing against unemployment," which is the second item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a recommendation, adopts the following recommendation, to be submitted to the members of the International Labor Organization for consideration with a view to effect being given to it by national legislation or otherwise, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

I. The general conference recommends that each member of the International Labor Organization take measures to prohibit the establishment of employment agencies which charge fees or which carry on their business for profit. Where such agencies already exist, it is further recommended that they be permitted to operate only under Government licenses, and that all practicable measures be taken to abolish such agencies as soon as possible.

II. The general conference recommends to the members of the International Labor Organization that the recruiting of bodies of workers in one country with a view to their employment in another country should be permitted only

by mutual agreement between the countries concerned and after consultation with employers and workers in each country in the industries concerned.

III. The general conference recommends that each member of the International Labor Organization establish an effective system of unemployment insurance, either through a Government system or through a system of Government subventions to associations whose rules provide for the payment of benefits to their unemployed members.

IV. The general conference recommends that each member of the International Labor Organization coordinate the execution of all work undertaken under public authority, with a view to reserving such work as far as practicable for periods of unemployment and for districts most affected by it.

Reciprocity of Treatment of Foreign Workers.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to the "question of preventing or providing against unemployment," which is the second item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a recommendation, adopts the following recommendation to be submitted to the members of the International Labor Organization for consideration with a view to effect being given to it by national legislation or otherwise, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

The general conference recommends that each member of the International Labor Organization shall, on condition of reciprocity and upon terms to be agreed between the countries concerned, admit the foreign workers (together with their families) employed within its territory, to the benefit of its laws and regulations for the protection of its own workers, as well as to the rights of lawful organization as enjoyed by its own workers.

Prevention of Anthrax.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to "women's employment: unhealthy processes," which is part of the third item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a recommendation, adopts the following recommendation, to be submitted to the members of the International Labor Organization for consideration with a view to effect being given to it by national legislation or otherwise, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

The general conference recommends to the members of the International Labor Organization that arrangements should be made for the disinfection of wool infected with anthrax spores, either in the country exporting such wool or if that is not practicable at the port of entry in the country importing such wool.

Protection of Women and Children Against Lead Poisoning.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to "women's and children's employment: unhealthy processes," which is part of the third and fourth items in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a recommendation, adopts the following recommendation, to be submitted to the members of the International Labor Organization for consideration with a view to effect being given to it by national legislation or otherwise, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

The general conference recommends to the members of the International Labor Organization that in view of the danger involved to the function of maternity and to the physical development of children, women and young persons under the age of 18 years be excluded from employment in the following processes:

(a) In furnace work in the reduction of zinc or lead ores.

(b) In the manipulation, treatment, or reduction of ashes containing lead, and in the desilverizing of lead.

(c) In melting lead or old zinc on a large scale.

(d) In the manufacture of solder or alloys containing more than 10 per cent of lead.

(e) In the manufacture of litharge, massicot, red lead, white lead, orange lead, or sulphate, chromate or silicate (frit) of lead.

(f) In mixing and pasting in the manufacture or repair of electric accumulators.

(g) In the cleaning of workrooms where the above processes are carried on.

It is further recommended that the employment of women and young persons under the age of 18 years in processes involving the use of lead compounds be permitted only subject to the following conditions:

(a) Locally applied exhaust ventilation, so as to remove dust and fumes at the point of origin.

(b) Cleanliness of tools and workrooms.

(c) Notification to Government authorities of all cases of lead poisoning, and compensation therefor.

(d) Periodic medical examination of the persons employed in such processes.

(e) Provision of sufficient and suitable cloakroom, washing, and mess-room accommodation, and of special protective clothing.

(f) Prohibition of bringing food or drink into workrooms.

It is further recommended that in industries where soluble lead compounds can be replaced by nontoxic substances, the use of soluble lead compounds should be strictly regulated.

For the purpose of this recommendation, a lead compound should be considered as soluble if it contains more than five per cent of its weight (estimated as metallic lead) soluble in a quarter of one per cent solution of hydrochloric acid.

Establishment of Government Health Services.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the

United States of America on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to "women's employment: unhealthy processes," which is part of the third item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a recommendation, adopts the following recommendation, to be submitted to the members of the International Labor Organization for consideration with a view to effect being given to it by national legislation or otherwise, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

The general conference recommends that each member of the International Labor Organization which has not already done so should establish as soon as possible, not only a system of efficient factory inspection, but also in addition thereto a Government service especially charged with the duty of safeguarding the health of the workers, which will keep in touch with the International Labor Office.

White Phosphorus in Manufacture of Matches.

The general conference of the International Labor Organization of the League of Nations, having been convened at Washington by the Government of the United States of America on the 29th day of October, 1919, and having decided upon the adoption of certain proposals with regard to the "extension and application of the international convention adopted at Bern in 1906 on the prohibition of the use of white phosphorus in the manufacture of matches," which is part of the fifth item in the agenda for the Washington meeting of the conference, and having determined that these proposals shall take the form of a recommendation, adopts the following recommendation, to be submitted to the members of the International Labor Organization for consideration with a view to effect being given to it by national legislation or otherwise, in accordance with the labor part of the Treaty of Versailles of June 28, 1919, and of the Treaty of St. Germain of September 10, 1919:

The general conference recommends that each member of the International Labor Organization, which has not already done so, should adhere to the international convention adopted at Bern in 1906 on the prohibition of the use of white phosphorus in the manufacture of matches.

INDUSTRIAL RELATIONS.

Labor: Its Grievances, Protests, and Demands.

[The following declarations, issued under this title, were adopted at a conference of national and international trades-unions, and executives of the four railroad brotherhoods, held at Washington, D. C., Dec. 13, 1919.]

WE speak in the name of millions who work—those who make and use tools—those who furnish the human power necessary for commerce and industry. We speak as part of the Nation and of those things of which we have special knowledge. Our welfare and interest are inseparably bound up with the well-being of the Nation. We are an integral part of the American people and we are organized to work out the welfare of all.

The urgent problems that sorely trouble our Nation and vitally affect us as workers make necessary this special consultation.

The great victories for human freedom must not have been won in vain. They must serve as the instruments and the inspiration for a greater and nobler freedom for all mankind.

Autocratic, political, and corporate industrial and financial influences in our country have sought, and are seeking, to infringe upon and limit the fundamental rights of the wage earners guaranteed by the Constitution of the United States.

Powerful forces are seeking more and more aggressively to deny to wage earners their right to cease work. We denounce these efforts as vicious and destructive of the most precious liberties of our people. The right to cease work—strike—as a final means of enforcing justice from an autocratic control of industry must be maintained.

The autocratic attitude and destructive action of the United States Steel Corporation and its subsidiary branches to oppress the workers by denying them the exercise of their freedom of action, freedom of association, freedom of expression, must give way to a better understanding and relation and to secure the wage earners in the exercise of their rights and liberties as free workers and citizens.

We realize fully all that is involved in the exercise of the right to strike, but only by the exercise of that right can industrial autocrats be compelled to abandon their tyranny and give way to the establishment of freedom and justice in industry.

American labor sets for itself the task, gladly and proudly assumed, to preserve and perpetuate this standard of justice and measure of liberty.

We protest against the attitude and action of the majority of the representatives of the employers in the employers' group who participated in the President's industrial conference October 6-23, 1919.

The proposals which the representatives of labor submitted to that conference were conservative, constructive, and helpful. They were calculated to establish a working basis for the promotion of better relations between employers and workers—the right to organize, the right to collective bargaining through representatives of the workers' own choosing. The representatives of the public constituted as a group indorsed and voted for that principle. By a small majority the employers' group voted against it, and thus the proposals were defeated and the conference failed.

The protection of the rights and interests of wage earners in national, State, and municipal service requires for them the right of organization. Since the interests of these workers can be best promoted through legislation and administration, their right to organization and affiliation with the American Federation of Labor must at all times be fully safeguarded.

The paramount issues that concern all the people of the United States, and in particular the wage earners, are the perversion and the abuse of the writ of injunction and the necessity for full and adequate protection of the voluntary associations of wage earners organized not for profit.

Government by injunction has grown out of the perversion of the injunction process. By the misuse of that process workers have been forbidden to do those things which they have a natural and constitutional right to do.

The injunction as now used is a revolutionary measure which substitutes government by judicial discretion or bias for government by law. It substitutes a trial by one man, a judge, in his discretion, for a trial by jury. This abuse of the injunctive process undermines and destroys the very foundations of our free institutions. It is subversive of the spirit of a free people working out their destiny in an orderly and rational manner.

Because we have reverence for law, because we believe that every citizen must be a guardian of the heritage given us by our fathers who fought for and established freedom and democracy, by every lawful means we must resist the establishment of a practice that would destroy the very spirit of freedom and democracy. Our protest against the abuse of the writ of injunction and its unwarranted application to labor in the exercise of labor's normal activities to realize laudable aspirations is a duty we owe to ourselves and to posterity.

Formerly injunctions issued in labor disputes were of a prohibitive character. Within the recent past this abuse of the injunction writ has been enlarged to include mandatory orders whereby men have been compelled to do specific things which they have a lawful right to refrain from doing.

We declare these abuses in the exercise of the injunction writ are clearly violative of the Constitution and that this issue must be determined definitely in accordance with the guaranties of the Constitution of the United States.

The Right to Strike.

WORKERS are free citizens, not slaves. They have the constitutional right to cease working. The strike is a protest against autocratic management. To penalize strikes or to make them unlawful is to apply an unwarrantable and destructive method when a constructive one is available. To reduce the necessity for strikes, the cause should be found and removed. The Government has a greater obligation in this matter than to use its coercive powers.

Legislation which proposes to make strikes unlawful or to compel the wage earners to submit their grievances or aspirations to courts or to governmental agencies is an invasion of the rights of the wage earners and when enforced makes for industrial serfdom or slavery.

We hold that the Government should supply information, assistance, and counsel, but that it should not attempt by the force of its own power to stifle or to destroy voluntary relations and policies of mutuality between employers and employees.

We specifically denounce the anti-strike provisions of the Cummins bill and all similar proposed legislation as un-American, as being vicious in character, and establishing by legislation involuntary servitude.

The warning given by Jefferson that the danger to the people of this Republic lies in the usurpation by our judiciary of unconstitutional authority, has been fully demonstrated. A judiciary unresponsive to the needs of the time, arrogating to itself powers which neither the Constitution nor the purposes of our laws have conferred upon them, demands that at least in our time Americans must insist upon safeguarding their liberties and the spirit of the sacred institutions of our Republic.

We urge that the judges of our Federal courts shall be elected by the people for terms not exceeding six years.

We assert that there can not be found in the Constitution of the United States or in the discussions of the congress which drafted the Constitution any authority for the Federal courts of our country to declare unconstitutional any act passed by Congress. We call upon

the people of our country to demand that the Congress of the United States shall take action for the purpose of preventing the Federal courts from continuing the usurpation of such authority.

We declare that the voluntary organizations of the workers, organized not for profit, are agencies of human progress and promote justice in industry and trade. Despite legislative declarations that trade-unions do not come under the provisions of antitrust legislation, courts have not understood and are not now able or willing to understand that the organizations of wage earners are not conspiracies in restraint of trade.

We submit that antitrust legislation has not only been interpreted to serve the purpose of outlawing trade-unions, robbing them of their treasuries and the savings of their members and depriving them of their legal and natural rights to the exercise of normal activities, but that it has also failed completely to protect the people against the outrageous machinations of combinations and monopolies.

The United Mine Workers of America did all in their power to avert an industrial controversy in the coal industry. The autocratic attitude of the mine owners was responsible for the losses and sufferings entailed. While the miners have returned to the mines and have only now been afforded the opportunity of having their grievances and demands brought to the light of reason, it is our hope that a full measure of justice will be accorded them even at this late date.

There is a widespread belief that wages should be fixed on a cost-of-living basis. This idea is pernicious and intolerable. It means putting progress in chains and liberty in fetters. It means fixing a standard of living and a standard of life and liberty which must remain fixed. America's workers can not accept that proposition.

They demand a progressively advancing standard of life. They have an abiding faith in a better future for all mankind. They discard and denounce a system of fixing wages solely on the basis of family budgets and bread bills. Workers are entitled not only to a living, but modern society must provide more than what is understood by the term, "a living." It must concede to all workers a fairer reward for their contribution to society, a contribution without which a progressing civilization is impossible.

No factor contributes more to industrial unrest and instability than excessive costs of necessities of life. It is a demonstrated truth that the cost of living has advanced more rapidly than have wages. The claim that increasing wages make necessary increased prices is false. It is intended to throw upon the workers the blame for a process by which all the people have been made to suffer. Labor has been compelled to struggle desperately to keep wages in some measure up to the cost of living. The demand for higher com-

pensation to meet new price levels has made industrial readjustment necessary.

Existing high and excessive prices are due to the present inflation of money and credits, to profiteering by those who manufacture, sell, and market products, and to burdens levied by middlemen and speculators. We urge:

The deflation of currency; prevention of hoarding and unfair price fixing; establishment of cooperative movements operated under the Rochdale system; making accessible all income tax returns and dividend declarations as a direct and truthful means of revealing excessive costs and profits.

The ideal of America should be the organization of industry for service and not for profit alone. The stigma of disgrace should attach to every person who profits unduly at the expense of his fellow men.

Maintenance of Production Essential.

LABOR is fully conscious that the world needs things for use and that standards of life can improve only as production for use and consumption increases. Labor is anxious to work out better methods for industry and demands it be assured that increased productivity will be used for service and not alone for profits.

Wage earners aspire to be something more than numbers on the books of an industrial plant, something more than attendants of a machine, something more than cogs in an industrial system dominated by machinery owned and operated for profit alone. The workers insist upon being masters of themselves.

Labor understands fully that powerful interests to-day are determined to achieve reaction in industry if possible. They seek to disband or cripple the organizations of workers. They seek to reduce wages and thus lower the standard of living. They seek to keep free from restriction their power to manipulate and fix prices. They seek to destroy the democratic impulse of the workers which is bred into their movement by the democracy of the American Republic.

Labor must be and is militant in the struggle to combat these sinister influences and tendencies. Labor will not permit a reduction in the standard of living. It will not consent to reaction toward autocratic control. In this it is performing a public service.

Only in high-wage countries is productivity in industry greatest. Only in high-wage countries do the people enjoy high standards of living. Low-wage countries present the least degree of productivity and offer to their people only low standards of living and restricted liberties. Autocracy always insists upon restricting the income and the activities of workers.

Creative power lies dormant where autocratic management prevails. No employer has a vested right to the good will of his employees. That must be earned, as between men. It can be earned only when management deals with workers as human beings and not as machines. There can not be a full release of productive energy under an autocratic control of industry. There must be a spirit of cooperation and mutuality between employers and workers. We submit that production can be enhanced through the cooperation of management with the trade-union agencies which make for order, discipline, and productivity.

We hold that the organization of wage earners into trade-unions and the establishment of collective bargaining are the first steps toward the proper development of our industrial machinery for service.

To promote further the production of an adequate supply of the world's needs for use and higher standards of life, we urge that there be established cooperation between the scientists of industry and the representatives of organized workers.

Credit is the life blood of modern business. At present, under the control of private financiers, it is administered, not primarily to serve the needs of production, but the desire of financial agencies to levy a toll upon community activity as high as "the traffic will bear."

Credit is inherently social. It should be accorded in proportion to confidence in production possibilities. Credit as now administered does not serve industry but burdens it. It increases unearned incomes at the expense of earned incomes. It is the center of the malevolent forces that corrupt the spirit and purpose of industry.

We urge the organization and use of credit to serve production needs and not to increase the incomes and holdings of financiers. Control over credit should be taken from financiers and should be vested in a public agency, able to administer this power as a public trust in the interests of all the people.

Since the Government has not worked out a constructive railroad policy, we urge for and on behalf of the railway workers and of the general public that the railroads be retained under Government administration for at least two years after January 1, 1920, in order that a thorough test may be made of governmental operation under normal conditions. The common carriers of this country are the arteries of travel, commerce, and industry. Transportation service and rates are intimately bound up with industrial production in all parts of the country. It is essential that a thorough test be given to all phases of railroad control and operation before a definite peacetime policy be finally concluded.

Never has the world been confronted with a more serious situation. Millions are in want, facing starvation. The children of war-stricken

Europe, half fed, underdeveloped, appeal for help. Only with infinite pain, unnecessary loss of life, and slowness of result can Europe rebuild her industries, restore her agriculture, and reestablish her commerce without the help of America.

The treaty setting forth the terms of peace has not been ratified by the United States. Boundaries are not fixed. Peoples are uncertain as to their allegiance. Under such conditions exchange and credit have lost voltage and in turn have paralyzed industry.

As members of an organized labor movement that has for years maintained fraternal relations with the working people of Europe, we feel that our Nation can not with honor and humanity maintain a policy of isolation and disinterestedness from the distress and suffering of the peoples of Europe. Even if the necessity of the peoples of Europe did not have a compelling appeal, the interrelated economic interests of the world would prevent our limiting our attention solely to this hemisphere.

Ratification of Peace Treaty.

THE peace treaty includes provisions in an international agreement to prevent war among nations, with all its cruelties and sacrifices of human life, with its burden of indebtedness and taxation; for reduction in standing armies, the diminution of great navies, and the limitation of the production of arms and ammunition. If the Senate shall fail to ratify the Treaty of Versailles, our Nation may be isolated from other countries of the world which at some time might be pitted against us. Such isolation and possibilities would make necessary the creation and maintenance of a large standing army and a greater and more effective navy in order in some degree to protect the Republic of the United States from aggression by those countries which were our allies in the Great War and which were and are now our friends.

In addition, the workers of America have a deep interest and concern in the labor draft convention of the treaty and in its purposes to raise to a higher standard the conditions of life and labor among the peoples of all countries. Its cardinal declarations and provisions are: That labor should not be regarded as a commodity; that the 8-hour day and 48-hour week are standard; that there shall be one day of rest, preferably Sunday, in each week; that child labor shall be abolished and continuing education for young workers assured; that men and women shall receive equal pay for equal work; that industrial betterments shall be enforced by proper inspection, in which women as well as men shall take part; that wages shall be sufficient to maintain a reasonable standard of living, as this

is understood in each time and country; and that employees as well as employers have the right of association for all lawful purposes.

The United States is protected by this draft convention in two ways: (1) That the recommendations which international labor conferences under the treaty may recommend may be accepted or rejected by our Government; (2) that no recommendation that would set a lower standard for the people of the United States than already exists within our borders can be at any time presented for consideration and action by the United States.

To give the united support of our Republic and of the allied countries to effective machinery to raise the standard of the workers' condition in backward countries, to help humanize industry for the common world weal, is, we insist, a paramount duty which our Republic must perform. We insist, for the reasons herein set forth, that it is the immediate duty of the Senate to ratify the Treaty of Versailles.

The American labor movement resents the attempt of reactionaries and autocrats to classify the men and women of labor with those groups which have nothing in common with its constructive purposes and high ideals and with the fundamental principles of our country. Those who aim to strike a blow against the legitimate aspirations of the workers in their struggle for freedom and for a higher and a better life must be met and overcome.

We call upon all those who contribute service to society in any form to unite in the furtherance of the principles and purposes and for the rectification of the grievances herein set forth. We call especial attention to the fact that there is a great community of interest between all who serve the world. All workers, whether of the city or country, mine or factory, farm or transportation, have a common path to tread and a common goal to gain.

The issues herein enumerated require the action of our people upon both the economic and political field. We urge that every practical action be taken by the American Federation of Labor, with the cooperation of all other organized bodies of workers, farmers, and sympathetic, liberty-loving citizens of the United States, to carry into effect the principles and purposes set forth in the declarations of this conference.

We call upon all to join with us in combating the forces of autocracy, industrial and political, and in the sublime task of ridding the world of the power of those who but debase its processes and corrupt its functions.

In all struggles for justice and human freedom, sacrifices have been made. Having made supreme sacrifices to crush militarism and political autocracy in Europe, America's workers will not surrender to political and industrial autocracy at home. In the struggle now

before us we will contest every effort made to fasten tyranny and injustice upon the people of our Republic. We are confident that freedom, justice, and the opportunity for a better day and a higher life shall be achieved.

The Industrial Courts Act (1919) of Great Britain.

GR^{EAT} Britain has recently legislated into existence permanent machinery for the voluntary arbitration of trade disputes through what is known as the Industrial Courts Act, which became a law November 20, 1919.

The necessity for legislation of this character arose from the prospective termination of the Wages (Temporary Regulation) Act, 1918, on November 21, 1919. Under the terms of this act wages had, since the signing of the armistice, been maintained at a level not lower than that prevailing at that time, unless modified by agreement of the parties concerned or by awards made by the interim court of arbitration, and thus there had been prevented a sudden drop in wages while industry was passing from a war to a peace basis.

The interim court of arbitration, established upon the passing of the Wages (Temporary Regulation) Act, 1918 to continue the work of the committee on production, which fixed wage awards during the war, had been dealing effectively with this stabilization of wages during the period of demobilization. The number of awards made by it in its duration of one year totaled 932, and it had, in addition, acted in an advisory capacity to the Minister of Labor in approximately 45 other matters dealing with wages and conditions of employment. In fact so satisfactory had this temporary measure proved that it seemed advisable to form a permanent body to which industrial disputes could in cases of necessity be referred for settlement, thereby creating among all classes a greater sense of certainty and security regarding industrial affairs. Accordingly the Industrial Courts Act (1919), the text of which follows, was enacted into law to meet this need:

Part I.—Industrial Courts.

1. (1) For the purpose of the settlement of trade disputes in manner provided by this act there shall be a standing industrial court, consisting of persons to be appointed by the Minister of Labor (in this act referred to as "the minister"), of whom some shall be independent persons, some shall be persons representing employers, and some shall be persons representing workmen, and in addition one or more women.

(2) A member of the industrial court shall hold office for such term as may be fixed by the minister at the time of his appointment.

(3) For the purpose of dealing with any matter which may be referred to it, the court shall be constituted of such of the members of the court as the president may direct.

(4) The president of the court, and the chairman of any division of the court, shall be such person, being one of the independent persons aforesaid, as the minister may by order, given either generally or specially, direct.

2. (1) Any trade dispute as defined by this act, whether existing or apprehended, may be reported to the minister by or on behalf of either of the parties to the dispute, and the minister shall thereupon take the matter into his consideration and take such steps as seem to him expedient for promoting a settlement thereof.

(2) Where a trade dispute exists or is apprehended the minister may, subject as hereinafter provided, if he thinks fit and if both parties consent, either—

(a) Refer the matter for settlement to the industrial court; or

(b) Refer the matter for settlement to the arbitration of one or more persons appointed by him; or

(c) Refer the matter for settlement to a board of arbitration consisting of one or more persons nominated by or on behalf of the employers concerned and an equal number of persons nominated by or on behalf of the workmen concerned, and an independent chairman nominated by the minister, and, for the purpose of facilitating the nomination of persons to act as members of a board of arbitration, the Minister of Labor shall constitute panels of persons appearing to him suitable so to act, and women shall be included in the panels.

(3) The minister may refer to the industrial court for advice any matter relating to or arising out of a trade dispute, or trade disputes in general or trade disputes of any class, or any other matter which in his opinion ought to be so referred.

(4) If there are existing in any trade or industry any arrangements for settlement by conciliation or arbitration of disputes in such trade or industry, or any branch thereof, made in pursuance of an agreement between organizations of employers and organizations of workmen representative respectively of substantial proportions of the employers and workmen engaged in that trade or industry, the minister shall not, unless with the consent of both parties to the dispute, and unless and until there has been a failure to obtain a settlement by means of those arrangements, refer the matter for settlement or advice in accordance with the foregoing provisions of this section.

3. (1) The minister may make, or authorize the industrial court to make, rules regulating the procedure of that court, and those rules may, amongst other things, provide for references in certain cases to a single member of the court, and provide for enabling the court to sit in two or more divisions, and to sit with assessors, who may be men or women, for enabling the court or any division of the court to act notwithstanding any vacancy in their number, and for enabling questions as to the interpretation of any award to be settled without any fresh report or reference.

(2) The minister may make rules regulating the procedure to be followed in cases where matters are referred for settlement to the arbitration of one or more persons appointed by the minister.

(3) The Arbitration Act, 1889, shall not apply to any reference to the industrial court, or to any reference to arbitration under this act.

(4) Where the members of the industrial court are unable to agree as to their award, the matter shall be decided by the chairman acting with the full powers of an umpire.

(5) Where any trade dispute referred to the industrial court involves questions as to wages, or as to hours of work, or otherwise as to the terms or conditions of or affecting employment which are regulated by any act other than this act, the court shall not make any award which is inconsistent with the provisions of that act.

Part II.—Courts of Inquiry.

4. (1) Where any trade dispute exists or is apprehended, the minister may, whether or not the dispute is reported to him under Part I of this act, inquire into the causes and circumstances of the dispute, and, if he thinks fit, refer any matters appearing to him to be connected with or relevant to the dispute to a court of inquiry appointed by him for the purpose of such reference, and the court shall, either in public or in private, at their discretion, inquire into the matters referred to them and report thereon to the minister.

(2) A court of inquiry for the purposes of this part of this act (in this act referred to as "a court of inquiry") shall consist of a chairman and such other persons as the minister thinks fit to appoint, or may, if the minister thinks fit, consist of one person appointed by the minister.

(3) A court of inquiry may act notwithstanding any vacancy in their number.

(4) The minister may make rules regulating the procedure of any court of inquiry, including rules as to summoning of witnesses, quorum, and the appointment of committees and enabling the court to call for such documents as the court may determine to be relevant to the subject matter of the inquiry.

(5) A court of inquiry may, if and to such extent as may be authorized by rules made under this section, by order require any person who appears to the court to have any knowledge of the subject matter of the inquiry to furnish, in writing or otherwise, such particulars in relation thereto as the court may require, and, where necessary, to attend before the court and give evidence on oath, and the court may administer or authorize any person to administer an oath for that purpose.

5. (1) A court of inquiry may, if it thinks fit, make interim reports.

(2) Any report of a court of inquiry, and any minority report, shall be laid as soon as may be before both Houses of Parliament.

(3) The minister may, whether before or after any such report has been laid before Parliament, publish or cause to be published from time to time, in such manner as he thinks fit, any information obtained or conclusions arrived at by the court as the result or in the course of their inquiry: *Provided*, That there shall not be included in any report or publication made or authorized by the court or the minister any information obtained by the court in the course of their inquiry as to any trade-union or as to any individual business (whether carried on by a person, firm, or company) which is not available otherwise than through evidence given at the inquiry, except with the consent of the secretary of the trade-union or of the person, firm, or company in question, nor shall any individual member of the court or any person concerned in the inquiry, without such consent, disclose any such information.

Part III.—Continuance of Certain Provisions of the Wages (Temporary Regulation) Act, 1918.

6. (1) The provisions of the Wages (Temporary Regulation) Act, 1918, which are specified in the schedule to this act shall, subject to the modifications specified in the second column of that schedule, continue in operation until the 30th day of September, 1920.

(2) Where, before the passing of this act, any matter has been referred for settlement under the Wages (Temporary Regulation) Act, 1918, and has not, at that date, been settled by the person or persons to whom it has been so referred, the minister may by order transfer the matter to the industrial court, and where any such matter is so transferred the award of that court shall have effect as if it were an award of the interim court of arbitration made under that act.

Part IV.—General.

7. Any expenses incurred by the minister in carrying this act into operation, including the expenses of the industrial court and of any court of inquiry, shall be paid out of moneys provided by Parliament.

8. For the purposes of this act—

The expression "trade dispute" means any dispute or difference between employers and workmen, or between workmen and workmen connected with the employment or nonemployment, or the terms of the employment or with the conditions of labor of any person:

The expression "workman" means any person who has entered into or works under a contract with an employer whether the contract be by way of manual labor, clerical work, or otherwise, be expressed or implied, oral or in writing, and whether it be a contract of service or of apprenticeship or a contract personally to execute any work or labor.

9. Provision shall be made by rules under this act with respect to the cases in which persons may appear by counsel or solicitor on proceedings under this act before the industrial court, before an arbitrator, or before a court of inquiry, and except as provided by those rules no person shall be entitled to appear on any such proceedings by counsel or solicitor.

10. This act shall not apply to persons in the naval, military, or air services of the Crown, but otherwise shall apply to workmen employed by or under the Crown in the same manner as if they were employed by or under a private person.

11. In the case of a trade dispute in the industry of agriculture, steps to be taken under this act by the minister of labor shall be taken in conjunction with the board of agriculture and fisheries.

12. (1) In the application of this act to Scotland a reference to an oversman shall be substituted for any reference to an umpire, and a reference to the board of agriculture for Scotland shall be substituted for any reference to the board of agriculture and fisheries.

(2) In the application of this act to Ireland, a reference to the department of agriculture and technical instruction for Ireland shall be substituted for any reference to the board of agriculture and fisheries.

13. The minister shall from time to time present to Parliament a report of his proceedings under this act.

14. This act may be cited as the Industrial Courts Act, 1919.

Schedule.

Provisions continued in force.

Modifications.

SEC. 1 (obligation to pay prescribed rates of wages).	As from the commencement of this act the power to substitute any enforceable rate for the prescribed rate shall cease, without prejudice, however, to the enforceability of any rate substituted for the prescribed rate before the commencement of this act, whether the
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substituted rate has or has not come into operation before that date, and without prejudice to the enforceability of any rate substituted for the prescribed rate by an award of the industrial court under Part III of this act.

SUBSEC. (2) of section 2 (settlement of differences).

As from the commencement of this act matters instead of being referred for settlement as provided in subsection (2) shall be referred to the industrial court.

The words "or as to whether any rate should be substituted for the prescribed rate" shall cease to have effect, and the proviso to subsection (2) shall not apply.

SEC. 3 (powers of inquiry).

SEC. 4 (definition of prescribed rates of wages).

SEC. 5 (legal proceedings).

As from the commencement of this act a reference to the industrial court shall be substituted for any reference to the interim court of arbitration.

Comments on the Act.

THE three main provisions of the act are:

(a) The creation in place of the interim court of arbitration of a permanent court of arbitration called the industrial court, to which industrial disputes may be referred if both parties concerned consent.

(b) The proposed appointment of a court of inquiry which shall make immediate investigation of any existing or apprehended dispute and give an impartial report of its merits to the public.

(c) The continuance of the Wages (Temporary Regulation) Act, 1918, until September 30, 1920.

Attention should be called to the fact that the arbitration, as provided for in the act, is purely voluntary on the part of the parties concerned. It is expected that it will be used only after all available means of settlement already existing between employers and employees have proved futile. At the insistence of labor no nonstrike clause was inserted in the act and its effect will therefore be to prevent, not to prohibit, strikes.

The court of inquiry, while it may call for the production of all documents and compel the attendance of witnesses in securing facts regarding a labor dispute, can not publish any information elicited in the inquiry "which is not available otherwise than through evidence given at the inquiry, except with the consent of the secretary of the trade-union or of the person, firm, or company in question, nor shall any individual member of the court or any person concerned in the inquiry, without such consent, disclose any such information." This provision, while doubtless necessary to protect firms and labor organizations in particular matters which they prefer should not become public, may in a measure limit the character of the report which is made to the public.

A continuation of the Wages (Temporary Regulation) Act should win the approval of labor, since, in stabilizing wages generally until arrangements can be made for putting them on a permanent basis, it also guarantees against reduction of women's wages in the near future.

Wide latitude is given the Minister of Labor in the establishment of the industrial court and of the courts of inquiry. In the case of the industrial court he appoints the personnel, the only restriction being that it shall consist of men and women representing the public, the employers, and the workers. The length of office of the members of the industrial court is also fixed by him. As regards courts of inquiry the minister may appoint any person or persons, as he thinks fit.

According to an official source¹ the court, while normally sitting in London, will make arrangements, where necessary, to hear cases at Glasgow, Newcastle, Manchester, Cardiff, and other important centers. It will also send individual members to hear cases locally, in which an immediate hearing is desired and which can be heard by one member of the court.

The following persons appointed by the Minister of Labor as the first members of the court are thus described in the *Manchester Guardian*, December 6, 1919, page 12:

Mr. William Mackenzie, since 1917 has been one of the chairmen of the committee on production and the interim court of arbitration. He has acted as arbitrator and conciliator in many industrial disputes for some years.

Mr. F. H. McLeod is the director of labor statistics of the ministry of labor, and formerly held that position under the Board of Trade. He has been the editor of the *Labour Gazette* for many years.

Mr. D. C. Cummings was general secretary of the Boilermakers' Society for nine years before entering the service of the Board of Trade and later the ministry of labor (as a labor adviser).

Mr. McKie Bryce is the secretary of the Engineering and National Employers' Federation, and of the employers' side of the provisional joint committee of the National Industrial Conference.

Mr. E. J. Brown is a director and past president of the London Master Builders' Association, and past president of the Institute of Builders.

Mr. F. S. Button was a member of the executive committee of the Amalgamated Society of Engineers, and in 1917 became a member of the committee on production and later of the interim court.

Miss Violet Markham (Mrs. James Carruthers) served as a deputy director in the women's section of the National Service Department in 1917.

Miss Cécile Matheson is lady warden of the Woodbrooke Settlement, Birmingham, and has been an appointed member of trade boards since 1914.

¹ *Labour Gazette*, London, December, 1919, p. 514.

The New Franco-Italian Labor Treaty.¹

THE negotiations for the conclusion of a new labor treaty between France and Italy resulted in the signing on September 30, 1919, of a compact which will be submitted for ratification to the parliaments of the respective countries. The treaty provides that the workers of either country, when employed in the other, shall be on the same footing as nationals with respect to labor conditions and shall enjoy the same benefits with reference to relief and social insurance.² The full text of the treaty (with the exception of its preamble) is translated.

Text of the Treaty.

ARTICLE 1. The two Governments agree to grant all administrative facilities to citizens of either of the two countries who intend to go to the other country for the purpose of working there.

With the reservation of temporary abrogations provided for in article 4 and the harmonizing of its own laws and regulations with the facilities which it has obligated itself to grant in the preceding paragraph, the country of origin shall not require any special authorization for the emigration of workers and their families, be it either individual or voluntary, or for the purpose of collective hiring.

These workers and their families shall be at liberty to enter the country of their destination which shall not require any special authorization for this purpose, with the reservation of temporary abrogations provided for in article 4 and the harmonizing of its own laws and regulations with the facilities which it has obligated itself to grant in paragraph one of the present article.

Wages and Working and Living Conditions.

ART. 2. The wages of immigrant workers shall not be lower than those received in the same undertaking and for equal work by native workers of the same occupational group, or, if native workers of this group are not employed in the same undertaking, they shall not be lower than the normal wages current in the district for workers of the same group.

The Government of the country of immigration obligates itself to see to it that within its territory the equality of wages of immigrant and native labor is observed.

ART. 3. Immigrant workers shall enjoy the same protection of the legislation and usages of the country as native workers with respect to working and living conditions.

All complaints of immigrant workers concerning the working and living conditions provided for them by employers or any other complaint requiring intervention of the public authorities shall be addressed or transmitted to the proper local authorities either directly or through the diplomatic or consular authorities. The proper local authorities shall make the necessary investigations and shall alone be competent to intervene.

¹ Bollettino dell'Ufficio del Lavoro. Rome, Nov. 16, 1919.

² For a discussion of European labor treaties in general, see the MONTHLY LABOR REVIEW for April, 1919, pp. 7-10.

Each of the two Governments may attach to its embassy in the other country a technical specialist charged with taking care of all labor matters and with maintaining relations with the proper central administrative authorities of the countries in which workers of the other country are being employed.

The two Governments shall facilitate the exercise of the functions of these attachés.

Stabilization of Labor Market.

ART. 4. If, at certain times, in certain districts and in certain occupations, the condition of the labor market should make it impossible to find employment for emigrants who individually and voluntarily come in quest of work, the interested Government shall through diplomatic channels immediately advise the Government of the other country thereof so that the latter may take the required measures.

The two Governments may by joint agreement examine correlative measures which with the same object in view could be adopted by each of the two countries.

ART. 5. The Governments of the two countries shall jointly see to it that the number of workers hired by means of a collective contract shall not injuriously affect the economic development of one of the two countries or the workers of the other country.

For this purpose they shall establish a commission which as a rule shall meet twice a year at Paris.

The respective representatives on this commission shall in particular be charged with (1) estimating approximately the number of workers that could possibly be hired and what number of workers it seems desirable to hire up to the next session of the commission; (2) indicating the districts to which the immigrant workers should preferably be directed and those to which owing to the prevailing condition of the labor market immigrant workers should not be directed. With this object in view each of the two States reserves to itself the right to consult the interested employers' and workers' organizations within its territory.

In order to assure the regular functioning of these administrative authorities, which in application of the internal laws of each of the two countries are charged with facilitating to emigrants passage of the border, the proper administrative authorities shall jointly determine those measures which are made necessary by existing conditions, and harmonize them as much as possible with the application of the respective laws and regulations.

Social Insurance.

ART. 7. The pension system for industrial and agricultural workers (inclusive of the special pension funds for miners) in force in each of the two countries shall be applied to citizens of the other country without any exclusion or reduction of the rights granted to nationals, but with reservation of the provisions made below concerning the computation and payment of the complementary pension and the State subsidy.

The advantages provided for in the present article shall be granted to insured persons who shall claim and obtain their pensions subsequent to the date of the coming into force of the present treaty. The same advantages shall be granted to widows and orphans whose claims shall arise subsequent to that date.

The following rules shall be applicable to complementary and State grants:

(a) The contributory periods and those considered as contributory periods which in accordance with the law are being computed either in Italy or in France shall be added for the purpose of determining the right to a pension.

(b) Each of the two States shall compute the amount of the pension to which the insured person would be entitled according to its rates, its law and the conditions required by the latter, for the entire time reckoned according to the provision of the preceding paragraph. Each State shall then determine the part of the pension to be borne by it, reducing the total amount previously determined in proportion to the period of time which concerns it.

The total of the quotas to be borne by each of the two States represents the amount of the pension to which the insured person is entitled.

In case, however, that the pension computed in this manner should amount to less than the pension which would be due from one of the two countries in accordance with its own law and by reason of the contributory periods or periods considered as contributory periods, elapsed within its territory the part of the pension to be borne by that State shall be increased by the difference.

The preceding rules are applicable to the quota of invalidity pensions to be borne by each State.

Death benefits in case of death of the insured person shall be payable to his survivors provided that these have submitted a claim within six months of his death. The two States shall share in the payment of these benefits in accordance with the rules laid down for pensions and State grants.

The agreements provided for in article 24 shall prescribe how the principles relating to rates of pensions and State grants shall be applied.

The relations between the Italian and French insurance carriers, the information which these must furnish to each other to make possible the keeping of individual accounts for insured nationals of the other country during the maturing and at the time of the liquidation of their pensions, and the necessary measures for facilitation, in accordance with the Franco-Italian agreement of April 5, 1904, of the payment in France through the French funds or the post-office department of the pensions due from Italian insurance carriers, and vice versa, shall be determined by the agreements provided for in article 24.

ART. 8. The principles of reciprocity already realized in the matter of compensation for industrial accidents is confirmed by the present treaty and shall be applicable to any possible development of the respective legislation.

The same principles shall, under conditions to be laid down in special agreements, be extended to all social insurance laws, covering various risks, such as sickness, invalidity, and unemployment, which may be enacted in the future.

Acquisition of Land.

ART. 9. In all matters relating to the acquisition, possession, and transfer of small rural and urban holdings the citizens of each of the two States shall in the territory of the other State enjoy the same rights and privileges granted to nationals, with the exception, however, of privileges granted for war service and with reservation of provisions which in the interest of national security were enacted for specified zones or localities in the laws on the right of residence and settlement of aliens.

Charitable Aid.

ART. 10. Italian workers and entrepreneurs who have become members of a French mutual aid society may become members of the administrative board

with the reservation that the number of alien members of the board shall not exceed one-half less one of the total membership of the board.

Italians residing in France who have become members of a mutual aid society approved or recognized as a public welfare society shall enjoy the benefits of the State subsidies to the pensions accruing from contributions as evidenced by individual pass books and shall have a right to pensions accruing from the common funds.

These provisions shall be applied reciprocally to French citizens living in Italy.

ART. 11. Subsidies to mutual unemployment benefit funds as well as subsidies furnished by public unemployment funds and aid given by public institutions through furnishing of work must be granted in each of the two States to the nationals of the other State.

ART. 12. Citizens of each of the two States who, owing to physical or mental sickness, pregnancy, or confinement, or for any other reason require aid, medical treatment, or any other assistance shall within the territory of the other signatory State, in the application of the laws on social aid, receive the same treatment as nationals with respect to aid at their home or in a medical institution.

Citizens of each of the two States shall be entitled in the other State to subsidies for the maintenance of their families, which shall have the character of simple relief, if their families live with them.

ART. 13. Expenditures for aid incurred by the State of residence shall not involve a claim to any refund on the part of the State, Department, Province, commune, or public institution of the country of which the person aided is a citizen, provided that such aid has become necessary owing to an acute disease pronounced as such by the attending physician.

In other cases, inclusive of relapses, claims to refund for the period of aid subsequent to the first 45 days shall be admissible.

ART. 14. The State of residence shall also continue to bear the burden of relief without refund—

1. In the case of maintenance either at their homes or in hospitals of aged, infirm, and incurable persons who have continuously resided for at least 15 years in the country in which they were admitted to the benefits of a pension, aid, or free admission to a home for the aged. This period shall be reduced by five years in cases of invalidity caused by one of the industrial diseases enumerated in a list contained in one of the agreements provided for in article 24.

2. In the case of all sick, insane, and all other persons aided who have continuously resided in the said country for five years. In case of curative treatment for a disease a worker who during said period has resided in the country at least five consecutive months during each year shall be considered as having resided there continuously.

With respect to children under 16 years of age it shall be sufficient if their father, mother, guardian, or the person in whose custody they are, fulfill the above conditions.

ART. 15. After the elapse of 45 days persons who have received relief and do not fulfill the requirements as to residence laid down in the preceding article shall, according to the choice of the State in which they claim citizenship and after notification by the State in which they reside, be either repatriated if they are in a condition to be transported or the costs of their medical care must be refunded by their State to the State in which they are residing. Repatriation shall not be enforced in the case of special relief of families with numerous children or of women in confinement.

ART. 16. The two Governments shall by means of agreements provided for in article 24 jointly regulate the details of the administrative measures relating (1) to the procedure, conditions, and form of the repatriation, and (2) the method of establishing and computing the duration of continuous residence.

The notices by the State of residence provided for in article 15 must reach the authorities of the State of domicile designated in the said agreement during the first 10 days of the period of 45 days; otherwise this period shall be extended by the entire duration of the delay.

The two Governments obligate themselves to see to it that in localities where large numbers of workers of the other nationality are gathered accommodations for hospital treatment for sick or injured workers and their families shall not be lacking.

Contributions which for this purpose may be imposed upon or voluntarily borne by employers shall not have the character of such special taxes on the employment of foreign labor as are prohibited below in article 21.

If the workers are assured of medical care at their homes, in hospitals, and infirmaries by their employer and at the latter's expense, they shall have a right to such treatment without refund of the costs.

Refunds claimable from the State of domicile in pursuance of the preceding article 15 shall not be demanded if the aforesaid expenditures are borne voluntarily by the employer or by reason of a clause in the labor contract.

This provision shall also be applicable if the costs are paid by a benevolent society or in any other way.

ART. 17. Benevolent, relief, and aid societies of Italian citizens in France and of French citizens in Italy, and societies in both countries having members of both nationalities which are organized and administered in accordance with the laws of the country, shall enjoy the same rights and privileges that are granted to French and Italian societies of the same character.

Arbitration Boards and Labor Laws.

ART. 18. Workers and employers of the two countries may become members of boards of conciliation and arbitration for the settlement of collective disputes between employers and employees in which they are interested.

If Italian workers of a mining establishment have chosen from among their fellow workers in the same establishment a delegate who shall submit their demands with respect to labor conditions either to the employers, or to miners' delegates, or to the authorities charged with the supervision of labor, the said French authorities shall extend facilities to the delegate for the exercise of the functions intrusted to him by his fellow workers; the same shall reciprocally apply to French miners in Italy.

ART. 19. Citizens of each of the two contracting parties shall in the territory of the other party enjoy equal treatment with nationals in all matters relating to the application of laws regulating labor conditions and assuring the hygiene and safety of workers.

This principle of equal treatment shall also be extended to any regulations of such matters promulgated in the two countries in the future.

Protection of Children and Adult Workers.

ART. 20. The commission composed of French and Italian citizens provided for in the Franco-Italian convention of June 15, 1910, for the protection of children and eventually of adult workers shall, in those district in which workers of the other country are employed in a sufficiently large number,

extend its protective activities to workers of all ages, be they Italian workers in France, or French workers in Italy. From now on they shall be composed as follows: (1) The prefect or subprefect, or a councilor of the prefecture; (2) the mayor of the commune or a communal councilor; (3) the factory inspector or one of his assistants; (4) the consul or his representative; (5) the president of a mutual aid, educational, or relief society of the other nation, or if such a society does not exist, a citizen of the other country residing in the district; (6) one representative each of the employers' and workers' organizations of the district; (7) one worker of each of the two nationalities.

Taxes.

ART. 21. Neither of the two signatory States shall impose special taxes on citizens of the other State by reason of their working in its territory.

This provision shall not prejudice the provisions of laws and regulations relating to general taxes imposed on aliens and in particular the taxes on the issuance of permits of residence. The same provision shall not be construed as exempting citizens of one of the signatory States who reside in the territory of the other State from any other tax, present and future, applicable to nationals of the country of residence.

ART. 22. The principle of equality of treatment of citizens of the two countries, with respect to admission to the public primary schools and to the establishment of private schools, having been sufficiently established in principle in each of the two countries by the respective school laws, the two Governments reserve to themselves the negotiation of a general convention relating to education and to include therein the measures required for the facilitation of elementary and vocational education of immigrant workers and their families.

Seamen and Fishermen.

ART. 23. One or more special conventions shall regulate in the spirit of the present treaty the situation of seamen, fishermen, and, in general, of the wage-working personnel of the fishing industry and of the merchant marine. Negotiations with this end in view shall begin, at the latest, during the year following the ratification of the present treaty.

It shall, however, be considered as agreed upon for the present that a system of pensions in the spirit of the conditions laid down in article 7 shall form the subject of one of the agreements to be concluded in pursuance of the provisions of article 24.

ART. 24. The proper administrative authorities of the two countries shall jointly determine measures concerning the details and the services required for the carrying out of those provisions contained in the present treaty which require the cooperation of the respective administrative authorities. They shall also determine the instances and conditions under which they shall carry on direct correspondence between themselves.

ART. 25. As the present treaty is not fully applicable to colonies, possessions, and protectorates, the two Governments obligate themselves to enter into negotiations, possibly during the year following the ratification of the present treaty, for the purpose of concluding one or more special conventions relating to their respective colonies, possessions, and protectorates which will regulate the matters dealt with by the present treaty in conformity with the principles and spirit of the latter.

ART. 26. The present treaty shall be ratified and ratifications shall be exchanged at Paris at the earliest possible time.

It shall become effective on the exchange of ratifications.

It shall be in force for one year and its renewal from year to year shall be implied unless notice denouncing it is given.

All disputes relating to the application of the present treaty shall be settled through diplomatic channels.

If a settlement can not be arrived at in this way, the said disputes shall, on demand of only one of the parties, be submitted to the decision of one or more arbitrators whose duty it shall be to settle the dispute in conformity with the fundamental principles and the spirit of the present treaty.

A special agreement shall regulate the constitution and the functions of the arbitration board. Each of the two parties may in the way of testimony submit an opinion rendered by international offices or organs competent in the matter.

Such an opinion may for the same purpose be jointly requested by the arbitrators.

Hungarian Industry Under the Soviet System.

THE Neue Freie Presse¹ publishes reports from two well-known Hungarian manufacturers on their experiences during the supremacy of the soviet system in Hungary.

Koloman Kando, managing director of an engineering and ship-building firm, makes the following statement:

The bluffing tactics which culminated in the reconciliation of the Hungarian socialists with the communists did not come as a surprise to those who had been in touch with the men employed in large plants and factories during the last weeks of Karolyi's term of power. Since the beginning of 1919 it was quite clear that a great part of the organized workers were drifting toward communism. At the shipbuilding yard of Ganz & Co., at Fiume, there was a revolt, which resulted in the director and most of the heads of departments being driven out. Similar occurrences had to be recorded at the Budapest factories of the company. Even at Fiume it became obvious that the outbreak had been organized at Budapest. In Budapest, workers' councils, which sought to take over the management of the factories, were formed to displace the directors and managers. The workers elected a new administration and demanded its recognition by the Government.

Thus, for months before the formal proclamation of a soviet republic, a sort of soviet management had been introduced into the factories. What happened on March 21, 1919, was merely the giving of a formal sanction to a system already in operation, the former owners of factories, who had been deprived of control, being expropriated. If anybody drew the attention of workers to the risk of what was being done he was told that nobody but the shareholders suffered damage. The workers asserted that they would take care that the factories should remain available for production and that they would soon acquire sufficient skill and knowledge to carry on work without the assistance of capitalists. As a matter of fact, factory workers did organize an armed guard for the protection of factories; and in the recent critical days scarcely any material damage was done to the buildings and plant.

¹Neue Freie Presse. Vienna, Sept. 13, 1919.

The fact that the business of the factories collapsed financially is to be ascribed chiefly to the tremendous decrease of output. This decrease, in turn, is attributable to three causes: (1) The complete lack of discipline; (2) the extravagant increase of wages; and (3) the abolition of piecework. It was quite in vain that the production commissioner appointed by the soviet government endeavored to restore discipline. The workers were fully conscious that the Government itself depended on their support. The foremen, who had to deal with discipline at first hand, had not the slightest disposition to bring the workmen back to sensible courses; for they knew that if they made any remark, however inoffensive it might be, they would be hustled out of the factory. While the wages paid in October, 1918, were more than 4 times those paid before the outbreak of the war, they were raised just before the collapse of the soviet régime to 11 times the peace-time wages. It is interesting to compare the annual increase of wages and salaries with the course of dividends paid by Ganz & Co. The increase of wages and salaries from 1914 to 1915 and from 1915 to 1916 were more than double the amount of the dividend for the previous year. After 1916 these increases amounted to 5 or 6 times as much. In these circumstances the possibility of continuing operations without loss became a pressing question. As the principal purchaser of manufactured goods, the State agreed to the principle that prices should be raised in due proportion to the advance of wages. As regards private purchasers, a system of "standard prices" was introduced. By this system prices were to be fixed arbitrarily after the occurrence of a dispute. True, this system enabled manufacturers to shift the burden of high wages to the shoulders of consumers; but, so far as the workpeople were concerned, it put employers in a very awkward position. They were deprived of their most effective protection against exorbitant demands for higher wages; for they could no longer declare that they were unable to pay higher wages without ruining the concern.

The rising wage curve is an index of the growing consciousness of power among workers. Even the leaders of the trade-unions have observed the advance of wage rates with some anxiety. One of them, who played a conspicuous rôle during the régime of the soviets, told me once, in January, 1918, that the present tremendous advances caused him sleepless nights and that he had very anxious forebodings in regard to the time when reductions shall have become unavoidable. But the caution and prudence of the men's leaders are of no practical use. They are no longer real leaders of the masses. Very often, even against their sincere convictions, they have to put forward the most extravagant demands.

Industrial conditions were made still worse by the abolition of piecework, and the payment of wages at time rates to all workers. Output sank suddenly to a fraction of the normal. In our car-building yard one gang of workmen used to construct eight skeleton cars per week. When time rates were introduced the output sank to four and even to three, wages having been multiplied by 11. This reduction of output was equivalent to multiplying the normal cost of production by 25.

Obviously the communistic administrators concerned became heavily indebted to the banks. The soviet government tried to overcome this difficulty by fixing arbitrary prices for products. Thus, the price of a steam plow, completely equipped, was fixed at 1,500,000 crowns,¹ though the price was only 80,000 crowns before the war and not more than 250,000 crowns even in January, 1919. Nobody who understands figures will require any further comment.

¹ Owing to the fluctuations in the value of the Austrian crown conversions are not made into American money. Normally the par value of the Austrian crown is 20.3 cents.

Dr. Franz Chorin, general manager of a coal mining company, contributed the following observations:

The soviet administration has had disastrous consequences for the coal-mining industry. The workers' councils were utterly unable to maintain discipline among their comrades. The miners came to work with extreme irregularity, and a continuous shrinkage of output resulted. The Government made some efforts to promote larger output. Commissioners visited various mines and works and admonished the men to turn out more products. But their speeches had no effect, for the speakers had neither authority nor influence. Continuous increases of wages were conceded and a minimum rate was fixed, the result being a continuous diminution of output.

It became almost impossible to procure the supplies of tools and other materials necessary for mining. The issue of paper money added to the difficulties. Without any hesitation, workmen refused to accept it. Owing entirely to the prudence of works managers, armed conflicts were avoided. No serious damage has been done to the collieries, and therefore the financial disaster is not quite beyond remedy. The moral damage, however, is very heavy. Although the workers have become calm and sober, they are still under the influence of the events of the last few months. Without time and care it will not be possible to bring them back to orderly activity.

Socialization of the Austrian Shoe Industry.

THE Austrian Government decided on September 20, 1919, to establish a socialized establishment under the name "Associated Leather and Shoe Factories" (*Bereinigte Leder- und Schuhfabriken*).¹ This puts into practice for the first time the law concerning socialized undertakings, passed by the national assembly on July 29, 1919, and regulating the legal form of socialized concerns. It is the first practical step toward the socialization of an important branch of industry.²

The new concern will be formed jointly by the State, the Wholesale Purchase Co. of the cooperative societies as representative of urban consumers, and the Agricultural Produce Trading Association representing rural consumers. The State will hand over to the new undertaking the leather works at Brünn and the boot and shoe factory at Mittendorf, which were State-owned during the war, and a factory building in Vienna to which the plant from the Mittendorf factory will be removed. The Wholesale Purchasing Co. and the Agricultural Trading Association will furnish the capital for the undertaking.

The enterprise will be managed by a board comprised of three State representatives (one from the Ministry of Finance and two from

¹ Arbeiter Zeitung. Vienna, Sept. 21, 1919.

² For other socialization measures in Austria see MONTHLY LABOR REVIEW for November, 1919, pp. 71-85.

the Ministry of Trade and Commerce); three members each from the Cooperative Wholesale Purchase Co. and the Agricultural Trading Association; four representatives of the manual workers and salaried employees of whom three will be chosen by the works council and one by the trade-union of workers in the boot and shoe industry; and one member of the business management, which will be appointed by the board. The establishment will, therefore, be directed entirely by representatives of the State, the consumers, and the workers; no capitalist will take any part in the control.

The net profits of the undertaking will be allotted as follows: One-quarter to the manual workers and salaried employees; one-quarter to the State; and one-quarter each to the two cooperative associations. The workers' share will be handed over to the works council, which will decide independently as to its disposal.

The undertaking will have an important effect on the shoe industry. Quite recently there has been an attempt to form a capitalistic trust under the directorship of the General Austrian Shoe Co. There is no doubt that the shoe industry must be centralized, if it is not to succumb to foreign competition. But centralization must be carried out, not by a capitalist monopoly, but in the interests of consumers and workers. This will be the task of the new enterprise, which will be the largest in the industry. About 900,000 pairs of boots and shoes should be produced yearly in the two factories. This represents one-third of the present production and one-seventh of the normal demand. It will aim also at bringing other undertakings in the boot and shoe and leather industries under its control. It is hoped to form a further joint concern in collaboration with the provincial government of Styria, by taking over the boot and shoe factory at Gosting. Furthermore large private concerns are to be converted into companies managed on socialized lines.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

RETAIL prices of food are secured by the Bureau of Labor Statistics from retail dealers in 50 cities through monthly reports of actual selling prices on the 15th of each month. These reports represent many thousands of sales to housewives in each of the 50 cities. Prices of 43 food articles¹ are now reported monthly by retail dealers, and prices of storage eggs are secured in January, February, October, November, and December. Quotations are secured on similar grades of commodities in all cities. There are, however, some local differences which must be taken into consideration when any comparison is made of the prices in the different cities.

1. The cut of beef known as "sirloin" in Boston, Mass.; Manchester, N. H.; Philadelphia, Pa.; and Providence, R. I., would be known as "porterhouse" in other cities. In these four cities, owing to the method of dividing the round from the loin, there is no cut that corresponds to "sirloin" in other cities. There is also a greater amount of trimming demanded by the trade in these cities than in others. This is particularly true of Providence, R. I.

2. In Boston, Mass.; Fall River, Mass.; Manchester, N. H.; New Haven, Conn.; Portland, Me.; and Providence, R. I., very little fresh plate beef is sold, and prices are not secured from these cities for this article.

3. The most of the sales in Newark, N. J., are on whole ham instead of the sliced, as in other cities.

There are also other local factors which should be taken into consideration. The cities for which prices are shown are widely separated; some are in localities near the source of supply while others are a greater distance from it, making it necessary to add to the prices a greater amount for transportation. Methods and costs of doing

¹ Retail prices for the 23 food articles given below have been secured each month since January, 1913: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lamb, lard, hens, flour corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

In addition to the 23 articles listed above, monthly prices have been secured for the following five articles since January, 1915: Canned salmon, navy beans, onions, prunes, and raisins.

Monthly retail prices have been secured since January, 1919, for the following 15 articles: Evaporated milk, oleomargarine, nut margarine, Crisco, rolled oats, corn flakes, Cream of Wheat, macaroni, cabbage, baked beans, canned corn, canned peas, canned tomatoes, bananas, and oranges.

Prices for storage eggs have been secured for January, February, November, and December only of each year including 1919, when prices were secured for October also.

business vary greatly in different localities due to the demands of customers, rentals, wages, and other fixed charges or expenses.

In addition to food prices, the following retail prices are secured from each of the 50 cities listed on page 66:

(a) Prices of coal are secured semiannually, and published in the March and September issues of the MONTHLY LABOR REVIEW.

(b) Prices of gas are secured annually and published in the June issue of the MONTHLY LABOR REVIEW.

(c) Prices of dry goods are secured quarterly and published in the April, July, October, and December issues of the MONTHLY LABOR REVIEW.

Statements that prices decreased in December are not borne out by the statistics of food prices compiled by the Bureau of Labor Statistics from these reports of actual sales prices sent in by retail dealers. These figures show that the retail cost of 22 articles of food in December was the highest ever attained, being more than 2 per cent higher than in November, 1919, 5 per cent higher than in December, 1918, and 89 per cent higher than in December, 1913. These comparisons are based on actual retail prices of 22 of the most essential foods,¹ weighted according to the consumption of the average family.

During the month from November 15 to December 15, 22 of the 44 articles of food for which prices were secured in 1919 increased as follows: Cabbage, 36 per cent; onions, 17 per cent; granulated sugar, 16 per cent; strictly fresh eggs, 11 per cent; Cream of Wheat and potatoes, 10 per cent each; raisins, 5 per cent; flour, 4 per cent; butter and storage eggs, 3 per cent each; fresh milk and canned salmon, 2 per cent each; lamb, evaporated milk, oleomargarine, cheese, macaroni, rice, canned peas, and bananas, 1 per cent each. Rib roast and chuck roast increased less than five-tenths of 1 per cent each. The 12 articles which decreased in price were: Pork chops, 10 per cent; lard and oranges, 4 per cent each; tea and prunes, 3 per cent each; sirloin steak, round steak, bacon, ham, navy beans, 1 per cent each; and hens and Crisco, less than five-tenths of 1 per cent. Plate beef, nut margarine, bread, corn meal, rolled oats, corn flakes, baked beans, canned corn, canned tomatoes, and coffee remained the same in price as in November.

During the year period from December, 1918, to December, 1919, 19 of the 29 articles for which prices were secured on both dates increased as follows: Onions, 108 per cent; prunes, 53 per cent; coffee, 51 per cent; raisins, 48 per cent; potatoes and granulated sugar, 34 per cent each; rice, 27 per cent; canned salmon, 16 per cent; flour, 15

¹ See first paragraph of note 1, p. 57. This comparison is based on all the articles for which prices have been secured each month since 1913, weighted according to the consumption of the average family. Lamb, for which the Bureau has no consumption figures, is not included in this comparison.

per cent; strictly fresh eggs, 11 per cent; storage eggs, 9 per cent; butter, 7 per cent; fresh milk, 6 per cent; bread, 4 per cent; corn meal and tea, 3 per cent each; hens and lard, 2 per cent each; and cheese, 1 per cent. Articles which decreased in price during the year were: Navy beans, 21 per cent; plate beef, 18 per cent; bacon, 14 per cent; chuck roast, 11 per cent; pork chops, 8 per cent; ham and round steak, 6 per cent each; rib roast, 5 per cent; sirloin steak, 3 per cent; and lamb, 2 per cent.

Table 1 gives average retail prices for December 15, 1919 and 1918, and November 15, 1919, together with the per cent of increase or decrease on December 15, 1919, compared with December 15, 1918, and November 15, 1919.

TABLE 1.—AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE, DEC. 15, 1919, COMPARED WITH DEC. 15, 1918, AND NOV. 15, 1919.

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (—), Dec. 15, 1919, compared with—	
		Dec. 15, 1918.	Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15, 1918.	Nov. 15, 1919.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	40.4	39.3	39.1	— 3	— 1
Round steak.....	do.....	38.2	36.2	35.9	— 6	— 1
Rib roast.....	do.....	31.9	30.2	30.3	— 5	(1)
Chuck roast.....	do.....	27.3	24.2	24.3	— 11	(2)
Plate beef.....	do.....	21.1	17.3	17.3	— 18	(3)
Pork chops.....	do.....	41.3	42.1	38.1	— 8	—10
Bacon.....	do.....	58.5	51.0	50.3	— 14	— 1
Ham.....	do.....	53.3	50.5	49.0	— 6	— 1
Lamb.....	do.....	34.4	33.4	33.6	— 2	+ 1
Hens.....	do.....	38.4	39.2	39.1	+ 2	(2)
Salmon, canned.....	do.....	31.4	35.7	36.4	+ 16	+ 2
Milk, fresh.....	Quart.....	15.7	16.4	16.7	+ 6	+ 2
Milk, evaporated (unsweetened).....	15-16 oz. can.....		16.8	16.9		+ 1
Butter.....	Pound.....	72.7	75.4	78.0	+ 7	+ 3
Oleomargarine.....	do.....		43.0	43.4		+ 1
Nut margarine.....	do.....		35.8	35.8		(2)
Cheese.....	do.....	42.7	43.0	43.3	+ 1	+ 1
Lard.....	do.....	34.2	36.4	34.9	+ 2	— 4
Crisco.....	do.....			37.7		(2)
Eggs, strictly fresh.....	Dozen.....	81.1	81.0	90.1	+ 11	+11
Eggs, storage.....	do.....	58.1	61.3	63.5	+ 9	+ 3
Bread.....	Pound ⁴	9.8	10.2	10.2	+ 4	(2)
Flour.....	do.....	6.7	7.4	7.7	+ 15	+ 4
Corn meal.....	do.....	6.4	6.6	6.6	+ 3	(2)
Rolled oats.....	do.....		9.2	9.2		(2)
Corn flakes.....	8-oz. pkg.....		14.1	14.1		(2)
Cream of Wheat.....	28-oz. pkg.....		25.2	27.6		+10
Macaroni.....	Pound.....		19.6	19.8		+ 1
Rice.....	do.....	13.9	17.6	17.7	+ 27	+ 1
Beans, navy.....	do.....	15.4	12.3	12.2	— 21	— 1
Potatoes.....	do.....	3.2	3.9	4.3	+ 34	+10
Onions.....	do.....	3.9	6.9	8.1	+108	+17
Cabbage.....	do.....		4.5	6.1		+35
Beans, baked.....	No. 2 can.....		17.0	17.0		(2)
Corn, canned.....	do.....		18.9	18.9		(2)
Peas, canned.....	do.....		19.1	19.2		— 1
Tomatoes, canned.....	do.....		16.1	16.1		(2)
Sugar, granulated.....	Pound.....	10.8	12.5	14.5	+ 34	+15
Tea.....	do.....	67.5	71.3	69.3	+ 3	— 3
Coffee.....	do.....	32.4	48.9	48.9	+ 51	(2)
Prunes.....	do.....	19.2	30.2	29.3	+ 53	— 3
Raisins.....	do.....	16.1	22.7	23.9	+ 48	+ 5
Bananas.....	Dozen.....		39.9	40.4		+ 1
Oranges.....	do.....		54.2	53.0		— 4
22 weighted articles ⁵					+ 5	+ 3

¹ Increase of less than five-tenths of 1 per cent.

² No change in price.

³ Decrease of less than five-tenths of 1 per cent.

⁴ Baked weight.

⁵ See first paragraph of note 1, page 57; lamb is not included.

For the six-year period, from December, 1913, to December, 1919, 6 of the 24 articles for which prices were secured in December, 1913, and upon which this comparison can be based, increased 100 per cent and over. Rice increased 103 per cent; corn meal, 113 per cent; lard, 121 per cent; potatoes, 126 per cent; flour, 141 per cent; granulated sugar, 169 per cent. All the other articles increased 50 per cent or over, with the exception of tea, which increased 27 per cent, and plate beef, which increased 43 per cent.

Table 2 gives average retail prices for the 6-year period, December 15, 1913, to December 15, 1919, inclusive, together with the per cent of increase or decrease on December 15, 1919, compared with December 15 of each specified year.

TABLE 2.—AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE DEC. 15 OF EACH SPECIFIED YEAR COMPARED WITH DEC. 15, 1913.

Article.	Unit.	Average retail price Dec. 15 —								Per cent of increase (+) or decrease (—) Dec. 15 of each specified year compared with Dec. 15, 1913.							
		1913	1914	1915	1916	1917	1918	1919	1914	1915	1916	1917	1918	1919			
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.									
Sirloin steak	Lb.	25.1	25.7	25.1	26.8	32.0	40.4	39.1	+ 2	(1)	+ 7	+ 27	+ 61	+ 56			
Round steak	Lb.	22.5	23.0	22.5	24.0	30.0	33.2	35.9	+ 2	(1)	+ 7	+ 33	+ 70	+ 60			
Rib roast	Lb.	19.9	19.9	19.7	21.0	25.3	31.9	30.3	(1)	- 1	+ 6	+ 27	+ 60	+ 52			
Chuck roast	Lb.	16.0	16.5	16.0	16.9	21.5	27.3	24.3	+ 3	(1)	+ 6	+ 31	+ 71	+ 52			
Plate beef	Lb.	12.1	12.5	11.9	12.8	16.1	21.1	17.3	+ 3	- 2	+ 6	+ 36	+ 74	+ 43			
Pork chops	Lb.	20.2	19.5	18.4	22.2	33.8	41.3	33.1	- 4	- 9	+ 10	+ 67	+ 104	+ 89			
Bacon	Lb.	26.7	27.8	27.3	29.8	48.7	58.5	50.3	+ 4	+ 2	+ 12	+ 82	+ 119	+ 88			
Ham	Lb.	26.5	26.8	27.0	33.2	43.5	53.3	49.9	+ 1	+ 2	+ 25	+ 61	+ 101	+ 88			
Lamb	Lb.	18.5	19.0	19.7	22.3	30.2	34.4	33.6	+ 3	+ 6	+ 21	+ 63	+ 86	+ 82			
Hens	Lb.	20.8	20.1	20.3	24.1	30.4	38.4	39.1	- 3	- 2	+ 16	+ 46	+ 85	+ 88			
Salmon (canned)	Lb.			19.8	21.2	29.0	31.4	38.4									
Milk, fresh	Qt.	9.1	9.0	8.9	10.0	13.1	15.7	16.7	- 1	- 2	+ 10	+ 44	+ 73	+ 84			
Milk, evaporated (unsweetened)	15-16 oz. can.							16.9									
Butter	Lb.	39.8	39.4	38.6	44.9	54.3	72.7	78.0	- 1	- 3	+ 13	+ 36	+ 83	+ 96			
Oleomargarine	Lb.							43.4									
Nut margarine	Lb.							35.8									
Cheese	Lb.	22.1	22.9	23.7	31.0	34.5	42.7	43.3	+ 4	+ 7	+ 40	+ 56	+ 93	+ 96			
Lard	Lb.	15.8	15.4	14.5	25.9	33.3	34.2	34.9	- 3	- 8	+ 61	+ 111	+ 116	+ 121			
Crisco	Lb.							37.7									
Eggs, strictly fresh	Doz.	47.6	47.6	46.5	52.9	63.4	81.1	90.1	(1)	- 2	+ 11	+ 33	+ 70	+ 89			
Eggs, storage	Doz.	34.5	31.7				58.1	63.5	- 8								
Bread	Lb. ²	5.6	6.5	7.0	7.9	9.3	9.8	10.2	+ 16	+ 24	+ 40	+ 66	+ 75	+ 82			
Flour	Lb.	3.2	3.7	3.7	5.5	6.7	6.7	7.7	+ 16	+ 16	+ 72	+ 109	+ 109	+ 141			
Corn meal	Lb.	3.1	3.2	3.2	3.9	7.1	6.4	6.6	+ 3	+ 3	+ 26	+ 129	+ 106	+ 113			
Rolled oats	Lb.							9.2									
Corn flakes	8-oz.-pkg.							14.1									
Cream of Wheat	28-oz.-pkg.							27.6									
Macaroni	Lb.							19.8									
Rice	Lb.	8.7	8.8	9.0	9.1	11.6	13.9	17.7	+ 1	+ 3	+ 5	+ 33	+ 60	+ 103			
Beans, navy	Lb.			8.9	14.3	18.8	15.4	12.2									
Potatoes	Lb.	1.9	1.5	1.9	3.5	3.1	3.2	4.3	- 2	(1)	+ 84	+ 63	+ 68	+ 126			
Onions	Lb.			3.5	5.7	5.0	3.9	8.1									
Cabbage	Lb.							6.1									
Beans, baked	No. 2 can							17.0									
Corn, canned	No. 2 can							18.9									
Peas, canned	No. 2 can							19.2									
Tomatoes, canned	No. 2 can							16.1									
Sugar, granulated	Lb.	5.4	6.0	6.7	8.3	9.4	10.8	14.5	+ 11	+ 24	+ 54	+ 74	+ 100	+ 169			
Tea	Lb.	51.4	54.6	54.6	54.6	62.1	67.5	69.3	(3)	(3)	(3)	+ 14	+ 21	+ 27			
Coffee	Lb.	29.8	29.7	29.9	30.8	32.4	48.9		(4)	(4)	(4)	+ 3	+ 9	+ 61			
Prunes	Lb.			13.3	13.8	16.4	19.2	29.3									
Raisins	Lb.			12.5	13.9	15.0	16.1	23.9									
Bananas	Doz.							40.4									
Oranges	Doz.							52.0									
22 weighted articles ³									+ 1	+ 1	+ 22	+ 51	+ 80	+ 89			

¹ No change in price.

² Baked weight.

³ Increase of less than five-tenths of 1 per cent.

⁴ Decrease of less than five-tenths of 1 per cent.

⁵ See first paragraph of note 1, page 57; lamb is not included.

Relative Retail Prices of 22 Articles of Food.

IN TABLE 3 the average monthly and yearly prices of 22 food articles¹ are shown as relative prices or *percentages* of the average prices for the year 1913. These relatives are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. The relative prices or percentages are computed to enable the reader more readily to grasp the *per cent* of change in the prices of an article. Relative prices must be used with caution, however. For example, the relative price of pork chops in November, 1919, was 200, which means that the money price was 200 per cent of the money price in 1913 or, in other words, the price doubled. The relative price of pork chops in December was 181, showing a drop of 19 points since November. This is not a drop of 19 per cent. It is a drop of 19 points from 200, which is a decrease of only 9.5 per cent.

In the last column of this table are given index numbers showing the changes by months and years in the retail cost of the 22 food articles weighted according to the importance of each article in the consumption of the average family. To aid the general reader, a brief description of the method used to compute these index numbers is given. The average price per unit of each commodity is multiplied by the number of units of that commodity consumed by the average family. The products are the cost to the average family of each of the 22 food articles. These products for each month and year are added. The aggregates thus obtained give the cost to the average family for each month and year of the 22 food articles. These aggregates show the actual money cost of the family market basket for each month and year. It would be very difficult to see at a glance the percentage changes in the cost of the family market basket from these aggregate money costs. The aggregates are therefore changed to percentages of the aggregate cost for the year 1913 by dividing each aggregate by the 1913 aggregate. The principle is the same as that used in converting the money prices of individual articles into relatives or percentages of the 1913 prices. The percentages thus obtained are called index numbers. They show what the cost of the family market basket is in each month and year in percentages of the cost of the same market basket in the year 1913. Since index numbers are merely relatives or percentages of the prices of a group of commodities, they must be used with all the caution required in the use of relative prices in general. Prices are obtained each month for 43 food articles, but only 22 of these articles are included in the retail food price index because the amounts consumed by the average family have been obtained as yet for only these 22 articles. These

¹ See first paragraph of note 1, p. 57. Lamb is not included.

articles comprise about two-thirds of the entire food budget of the average family and reflect with great accuracy *changes* in the cost of the food budget.

From September, 1915, there has been a steady increase in the cost of these 22 articles of food. In December, 1918, the cost of these foods was 87 per cent above the 1913 average. In January, 1919, there was a slight decline. February prices declined 7 per cent, but from that date until June the prices advanced. In June there was a decline of less than five-tenths of one per cent. July prices increased 3 per cent. August prices showed a further increase of 1 per cent, reaching the highest level up to that date. In September there was a decrease of 2 per cent; in October, a further decrease of two-tenths of 1 per cent, but in November, there was an increase of more than 2 per cent, which brought the cost up to the previous high-water mark in August. In December there was a further increase of 2.6 per cent. This made the cost in December of these 22 food articles 2.6 per cent higher than ever before. Using the average cost in the year 1913 as the base, or 100, the relative figure representing the December cost was 197, or an increase of 97 per cent over the year 1913.

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907, TO DECEMBER, 1919.

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Bacon.	Ham.	Lard.	Hens.	Eggs.	Butter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Potatoes.	Sugar.	Coffee.	Tea.	22 weight-ed arti-cles.
1907.....	71	68	76	.....	.....	74	74	76	81	81	84	85	.....	87	.....	95	88	.....	.....	105	.....	.....	82
1908.....	73	71	78	.....	.....	76	77	78	80	83	86	83	.....	90	.....	102	92	.....	.....	111	108	.....	84
1909.....	77	74	81	.....	.....	83	83	82	90	89	93	90	.....	91	.....	109	94	.....	.....	112	107	.....	89
1910.....	80	78	85	.....	.....	92	95	91	104	94	98	94	.....	95	.....	108	95	.....	.....	101	109	.....	93
1911.....	81	79	85	.....	.....	85	91	89	88	91	93	88	.....	96	.....	102	94	.....	.....	130	111	.....	92
1912.....	91	89	94	.....	.....	91	91	91	94	93	99	98	.....	97	.....	115	102	.....	.....	132	115	.....	98
1913: Av. for year.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
January.....	94	92	95	93	92	89	94	93	97	95	108	107	100	100	100	100	99	99	99	91	108	100	98
February.....	94	93	95	93	93	90	95	94	98	97	91	108	100	100	100	100	98	98	98	100	100	100	97
March.....	97	96	98	98	98	97	97	97	99	100	77	108	100	100	100	100	98	98	98	88	100	100	97
April.....	101	101	101	101	101	100	103	99	100	104	76	106	100	100	100	100	98	98	98	97	98	100	98
May.....	101	100	101	101	101	100	100	99	100	104	74	99	99	99	100	101	98	98	98	91	97	100	97
June.....	102	101	102	102	101	99	101	102	100	103	81	92	99	99	100	101	98	98	98	104	97	100	98
July.....	104	104	102	103	101	103	104	104	101	102	87	91	99	99	100	101	98	100	100	110	100	100	100
August.....	104	104	102	103	101	104	105	106	102	101	96	92	100	99	100	100	100	100	100	109	102	100	101
September.....	103	104	101	103	102	108	104	104	102	101	109	96	100	100	100	100	102	100	100	110	104	100	102
October.....	101	104	101	103	102	107	103	102	101	100	121	100	101	102	100	99	103	103	100	106	101	100	104
November.....	100	102	102	102	102	102	101	100	101	97	144	101	102	102	100	99	104	104	100	107	99	100	105
December.....	99	101	100	101	102	97	99	99	100	98	138	104	102	102	100	99	104	104	100	106	98	100	104
1914: Av. for year.....	102	106	103	104	104	105	102	102	99	102	102	94	104	100	112	104	105	101	101	108	108	100	102
January.....	99	102	100	102	102	99	98	98	100	102	126	104	104	102	110	98	104	100	108	95	99	100	104
February.....	99	102	101	102	102	100	98	99	99	104	106	93	104	102	110	99	103	100	108	94	99	100	101
March.....	100	103	101	102	102	100	99	99	99	105	90	92	105	101	110	99	103	100	107	93	100	100	99
April.....	100	103	102	103	103	100	99	99	99	108	74	85	104	100	110	99	103	100	105	91	100	100	97
May.....	102	105	102	103	103	106	99	99	98	106	77	85	103	100	110	99	103	100	112	91	100	101	98
June.....	103	106	103	104	103	103	100	100	97	103	82	83	103	100	110	99	103	100	132	93	100	101	99
July.....	106	109	105	106	104	106	101	103	97	103	87	89	103	100	110	98	103	100	155	95	99	101	102
August.....	110	113	108	109	107	119	107	108	99	104	96	94	103	100	112	106	105	101	111	143	100	101	107
September.....	107	110	105	108	107	113	108	108	99	103	107	98	104	100	114	113	109	101	105	145	100	101	107
October.....	103	107	104	106	106	110	106	105	98	100	113	98	104	101	114	111	109	101	89	132	99	101	105
November.....	100	105	104	105	104	105	104	102	99	97	131	103	104	101	114	112	109	101	83	113	99	101	105
December.....	101	103	101	103	103	93	103	100	97	94	139	103	105	101	116	113	107	101	89	110	99	101	105
1915: Av. for year.....	101	103	101	101	100	96	100	97	93	97	99	93	105	99	124	126	108	104	84	120	101	100	101
January.....	100	102	101	101	102	88	101	98	97	95	129	101	105	101	124	124	109	104	85	110	101	100	103
February.....	98	100	100	99	101	85	99	96	97	97	98	98	106	100	126	138	110	104	84	118	101	100	101
March.....	97	99	99	98	100	85	99	95	96	99	74	94	106	99	126	136	110	104	82	120	101	100	98
April.....	99	100	100	99	100	94	98	94	95	100	75	94	105	98	126	139	109	104	86	122	101	100	99
May.....	101	103	101	101	101	96	101	96	96	101	76	91	106	98	128	137	109	104	89	124	101	100	100
June.....	103	105	103	103	101	98	99	97	95	98	78	90	106	98	128	130	109	104	99	125	101	100	100

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907, TO DECEMBER, 1919.—Continued.

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Pas- con.	Ham.	Lard.	Eggs.	But- ter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Pota- toes.	Sugar.	Coffee.	Tea.	22 weight- ed arti- cles. ¹
1915, etc.—Con.																						
July.....	105	107	104	103	101	100	100	98	93	97	81	105	98	126	125	108	104	85	127	101	100	100
August.....	104	107	104	103	101	103	100	98	89	97	88	103	99	126	124	108	104	82	123	101	100	100
September.....	104	106	103	102	101	107	100	97	88	97	88	103	99	124	117	108	104	79	118	100	100	100
October.....	103	104	102	101	99	110	101	99	91	97	117	103	104	124	113	108	104	94	111	100	100	103
November.....	101	102	101	99	98	99	101	99	91	95	123	105	100	122	113	107	104	97	119	100	100	104
December.....	99	101	100	99	98	87	101	100	92	95	135	107	100	122	114	107	104	106	124	100	100	105
1916: Av. for year.																						
January.....	108	110	107	107	106	108	105	109	111	111	103	117	102	130	135	113	105	155	146	100	100	114
February.....	101	102	101	99	99	89	101	101	93	101	123	110	100	122	120	107	105	136	123	100	100	107
March.....	101	102	102	99	100	92	101	102	94	104	101	97	112	100	124	107	104	141	125	100	100	106
April.....	104	104	103	102	104	103	104	103	96	107	82	105	113	100	124	107	104	140	137	100	100	107
May.....	106	106	106	105	107	104	107	104	100	111	79	108	113	99	124	119	108	138	145	100	100	109
June.....	109	112	110	109	107	109	105	109	106	113	82	97	112	99	124	117	108	140	156	100	100	109
July.....	113	113	111	111	110	110	107	110	108	114	87	95	111	99	124	116	108	134	160	100	100	111
August.....	113	116	112	112	109	111	107	111	110	113	93	110	100	124	116	108	105	134	160	100	100	111
September.....	112	115	111	110	107	116	108	111	111	112	105	111	101	126	134	110	105	141	155	100	100	113
October.....	108	111	108	108	106	118	110	114	123	114	132	109	102	136	148	113	105	161	141	100	100	118
November.....	106	108	106	107	106	111	111	114	135	112	149	132	109	150	174	126	105	165	149	100	100	121
December.....	106	107	106	106	106	106	110	114	137	112	154	140	112	138	167	131	105	198	157	100	100	126
1917: Av. for year.																						
January.....	124	130	126	131	130	152	152	142	175	134	139	127	150	164	211	192	119	253	169	101	107	146
February.....	109	111	109	109	113	110	114	136	119	119	158	118	141	112	140	171	132	225	140	100	100	128
March.....	113	117	114	116	116	125	114	118	138	126	147	122	142	112	142	171	136	240	148	100	100	133
April.....	116	119	118	123	121	133	123	135	151	129	101	121	146	112	144	174	137	287	160	101	101	145
May.....	125	130	127	131	132	146	141	136	167	136	112	133	150	114	150	206	154	339	175	101	101	151
June.....	127	133	130	134	135	146	155	146	176	136	116	122	153	117	168	266	178	352	183	101	103	151
July.....	129	135	132	137	137	148	158	145	177	136	119	123	153	119	170	240	182	366	170	101	104	152
August.....	129	137	130	137	136	151	159	147	174	131	122	120	149	125	176	220	195	246	166	103	110	146
September.....	130	138	129	136	134	164	160	147	176	131	134	124	148	128	182	229	219	222	181	102	111	149
October.....	131	133	131	137	135	185	184	152	198	146	152	129	152	132	176	223	272	206	172	102	112	153
November.....	130	138	120	136	136	185	178	159	198	146	160	133	158	143	176	214	232	178	177	102	113	157
December.....	124	133	127	132	134	163	179	159	207	138	168	138	156	144	176	208	235	183	174	102	114	155
1918: Av. for year.	126	134	128	134	134	161	181	161	211	143	181	142	156	147	166	205	235	178	172	102	114	157
January.....	133	165	155	168	170	186	196	178	211	177	165	151	162	156	172	203	227	188	176	102	119	168
February.....	129	137	130	138	142	163	180	162	208	154	185	148	136	151	165	200	233	188	173	102	115	160
March.....	131	141	133	142	146	160	179	163	209	170	182	151	158	151	167	200	233	188	193	102	112	161
April.....	133	143	135	145	150	161	181	164	210	.....	123	144	159	151	168	200	240	187	167	102	113	154
May.....	144	155	148	159	164	170	183	166	209	.....	123	132	154	148	172	200	237	139	165	101	117	154
1919: Av. for year.	157	170	161	174	181	175	187	170	208	178	123	133	151	148	174	200	233	141	129	165	101	117

June.....	168	182	169	184	188	177	191	173	206	177	133	150	146	175	203	223	144	171	165	101	119	162
July.....	166	181	168	182	185	180	194	181	206	178	142	152	148	174	203	223	148	229	167	101	120	167
August.....	163	178	165	177	181	199	201	180	209	181	135	157	153	174	206	227	154	229	169	101	121	171
September.....	164	178	165	178	181	220	208	193	213	185	141	163	161	174	206	230	157	229	175	102	122	178
October.....	161	175	163	174	178	216	214	193	216	183	186	170	166	172	203	227	161	206	193	102	124	181
November.....	159	173	162	172	175	205	216	195	216	185	215	184	173	172	203	217	161	194	196	103	125	183
December.....	159	171	161	171	174	197	217	198	216	180	235	190	176	172	203	213	160	188	196	109	124	187
1919: Av. for year.	164	174	164	169	167	201	205	199	234	193	182	177	174	175	218	213	174	224	205	145	129	186
January.....	162	175	165	175	181	193	217	199	211	188	218	184	201	175	200	207	159	188	196	117	127	185
February.....	162	174	165	174	181	180	205	193	203	188	147	149	185	174	203	230	164	182	195	123	126	172
March.....	165	177	169	178	183	184	203	191	211	198	140	174	183	160	200	197	154	171	193	126	129	175
April.....	172	182	175	184	187	197	212	197	223	202	143	186	190	169	218	200	154	182	193	129	128	182
May.....	175	187	178	186	181	205	210	203	246	204	154	177	191	167	227	207	154	194	193	136	128	185
June.....	170	181	171	176	174	202	212	205	254	200	155	165	192	169	227	210	159	224	193	143	129	184
July.....	171	183	169	173	168	220	215	211	266	197	164	164	195	169	227	217	168	282	198	155	130	190
August.....	166	177	164	166	160	223	214	212	266	190	174	167	174	177	224	220	178	294	202	160	130	192
September.....	161	170	158	158	150	219	206	205	242	194	183	172	195	176	221	223	190	253	200	164	130	188
October.....	157	165	155	153	145	211	196	195	228	189	209	186	192	180	221	220	199	224	207	159	131	188
November.....	155	162	153	151	143	200	189	188	231	184	235	197	195	184	224	220	202	229	227	164	131	192
December.....	154	161	153	152	143	181	186	185	221	184	261	204	196	188	233	220	203	253	264	164	127	197

The curve shown in the chart on page 67 pictures more readily to the eye the changes in the cost of the family market basket and the trend in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale¹ because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

Retail Prices of Food in 50 Cities on Specified Dates.

AVERAGE retail food prices are shown in Table 4 for 19 cities for November and December, 1919, and for December of each year, 1913, 1914, 1917, and 1918. These cities are as follows:

Atlanta, Ga.	Denver, Colo.	Pittsburgh, Pa.
Baltimore, Md.	Detroit, Mich.	St. Louis, Mo.
Birmingham, Ala.	Los Angeles, Calif.	San Francisco, Calif.
Boston, Mass.	Milwaukee, Wis.	Seattle, Wash.
Buffalo, N. Y.	New Orleans, La.	Washington, D. C.
Chicago, Ill.	New York, N. Y.	
Cleveland, Ohio.	Philadelphia, Pa.	

In Table 5, average prices are shown for November and December, 1919, for 31 other cities as follows:

Bridgeport, Conn.	Little Rock, Ark.	Portland, Me.
Butte, Mont.	Louisville, Ky.	Portland, Oreg.
Charleston, S. C.	Manchester, N. H.	Providence, R. I.
Cincinnati, Ohio.	Memphis, Tenn.	Richmond, Va.
Columbus, Ohio.	Minneapolis, Minn.	Rochester, N. Y.
Dallas, Tex.	Mobile, Ala.	St. Paul, Minn.
Fall River, Mass.	Newark, N. J.	Salt Lake City, Utah.
Houston, Tex.	New Haven, Conn.	Scranton, Pa.
Indianapolis, Ind.	Norfolk, Va.	Springfield, Ill.
Jacksonville, Fla.	Omaha, Nebr.	
Kansas City, Mo.	Peoria, Ill.	

¹ For discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts," by Lucien W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, The "Ratio" Chart, by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pages.

TREND IN RETAIL PRICES OF 22 FOOD ARTICLES, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO DECEMBER, 1919.

[Average for 1913 = 100.]

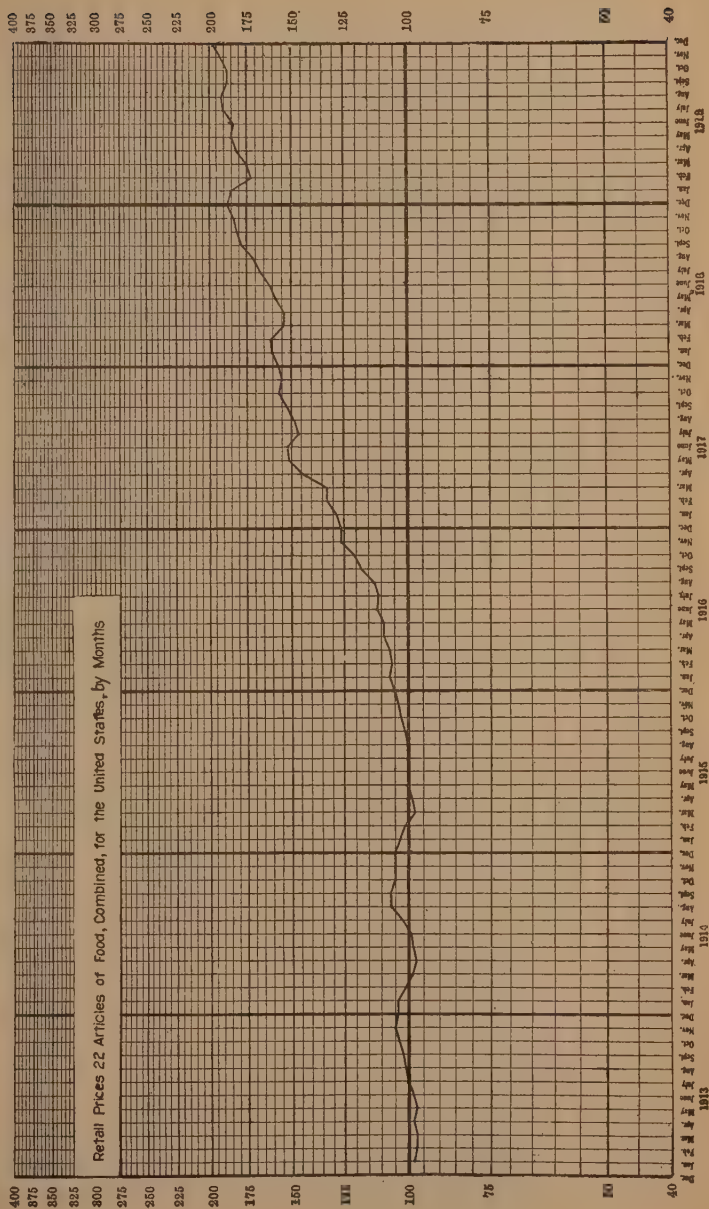


TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

Article.	Unit.	Atlanta, Ga.						Baltimore, Md.					
		Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	23.7	24.6	30.7	39.4	38.3	37.4	22.3	22.4	31.9	44.0	39.4	38.9
Round steak.....	Lb.	21.3	21.3	27.7	36.4	35.3	34.7	20.8	20.8	31.0	42.9	37.1	36.8
Rib roast.....	Lb.	19.7	18.6	23.8	30.8	28.1	27.3	17.5	18.4	26.2	34.7	32.1	31.6
Chuck roast.....	Lb.	15.8	15.7	20.8	25.8	22.8	21.5	15.3	15.2	22.7	30.4	24.4	24.8
Plate beef.....	Lb.	9.9	9.7	15.2	22.1	17.4	16.1	12.6	13.0	18.1	23.7	17.9	17.0
Pork chops.....	Lb.	23.3	21.8	35.7	41.1	41.5	37.9	17.0	15.8	33.6	40.3	39.8	33.5
Bacon.....	Lb.	31.4	30.2	50.5	62.9	56.7	55.3	20.5	23.5	45.8	56.8	46.2	42.4
Ham.....	Lb.	30.0	29.4	43.4	55.7	54.0	51.7	27.5	31.0	47.7	59.1	54.4	50.8
Lamb.....	Lb.	20.2	19.4	32.5	38.7	36.5	34.4	17.5	20.0	32.4	36.7	32.5	32.8
Hens.....	Lb.	20.3	19.6	30.6	35.6	38.4	37.9	20.7	19.2	31.0	39.7	41.2	39.5
Salmon (canned).....	Lb.			23.5	26.4	30.6	28.8			25.4	27.7	33.5	34.2
Milk, fresh.....	Qt.	10.8	10.6	17.7	20.0	25.0	25.0	8.7	8.7	12.8	17.0	16.0	16.0
Milk, evaporated (unsweetened).....	(2)					17.9	18.1					16.4	16.4
Butter.....	Lb.	40.4	39.4	55.2	71.6	76.5	78.5	40.2	40.5	56.8	74.7	78.1	81.2
Oleomargarine.....	Lb.					44.4	47.0					40.4	41.0
Nut margarine.....	Lb.					40.4	40.7					36.1	35.9
Cheese.....	Lb.	25.0	25.0	35.0	44.2	42.2	42.8	23.3	23.3	35.1	45.5	42.8	43.2
Lard.....	Lb.	15.5	15.3	34.0	35.3	36.5	34.4	14.8	14.8	33.0	34.0	35.5	32.2
Crisco.....	Lb.					35.9	34.3		29.9			35.3	35.1
Eggs, strictly fresh.....	Doz.	43.3	40.9	57.1	77.9	71.8	91.4	40.4	43.5	62.0	78.6	76.3	87.8
Eggs, storage.....	Doz.	28.5	28.5	43.8	68.8	60.5	63.1	33.1	29.9	44.6	60.6	61.1	61.9
Bread.....	Lb. ³	5.6	6.3	9.9	10.0	10.0	10.0	5.5	5.9	8.6	9.7	9.6	9.6
Flour.....	Lb.	3.4	3.7	7.1	6.8	7.3	7.3	3.1	3.6	6.6	7.0	7.7	8.0
Corn meal.....	Lb.	2.6	2.8	5.2	5.7	5.6	5.6	2.5	2.7	6.1	6.1	5.6	5.5
Rolled oats.....	Lb.					10.6	10.6					7.8	7.9
Cornflakes.....	(4)					14.0	14.1					13.1	12.9
Cream of wheat.....	(5)					24.4	27.9					23.3	27.1
Macaroni.....	Lb.					20.3	20.5					18.2	18.3
Rice.....	Lb.	8.6	8.6	11.2	14.3	17.3	17.6	9.0	9.0	11.6	14.2	18.0	17.9
Beans, navy.....	Lb.			18.8	17.5	14.5	14.7			18.7	16.9	11.9	11.7
Potatoes.....	Lb.	2.3	1.8	3.9	4.2	5.0	4.8	1.8	1.5	3.0	3.5	3.7	3.6
Onions.....	Lb.			5.9	5.3	8.2	9.1			5.4	4.2	6.4	7.5
Cabbage.....	Lb.					6.2	6.5					4.0	5.6
Beans, baked.....	(6)					15.9	16.3					15.8	15.5
Corn, canned.....	(6)					20.4	20.0					18.1	17.8
Peas, canned.....	(6)					20.4	20.4					18.4	18.2
Tomatoes, canned.....	(6)					14.5	14.5					15.2	15.2
Sugar, granulated.....	Lb.	5.5	6.5	10.4	10.9	13.5	22.6	4.9	5.5	9.5	10.4	11.0	13.8
Tea.....	Lb.	60.0	60.0	79.0	87.1	87.6	87.6	56.0	56.0	65.3	73.1	71.1	71.6
Coffee.....	Lb.	32.0	33.0	28.8	32.1	49.8	51.0	24.4	24.4	28.6	31.0	46.1	45.8
Prunes.....	Lb.			17.7	19.2	24.4	24.8			17.5	19.1	30.0	30.1
Raisins.....	Lb.			16.7	18.3	21.5	22.8			15.1	16.3	22.6	23.8
Bananas.....	Doz.					37.7	34.2					31.8	32.2
Oranges.....	Doz.					40.6	41.3					59.1	52.2

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin steak."

ON DEC. 15, 1913, 1914, 1917, 1918, 1919, AND NOV. 15, 1919, FOR 19 CITIES.

Birmingham, Ala.					Boston, Mass.					Buffalo, N. Y.							
Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
28.0	27.5	35.0	40.7	39.1	38.7	133.0	136.0	142.7	156.1	60.2	58.9	21.6	22.4	31.0	38.5	35.9	35.8
23.0	24.0	32.3	36.6	36.8	36.8	34.3	34.5	42.7	56.4	55.7	53.9	18.8	20.0	29.0	36.0	32.4	32.6
20.5	20.9	25.0	32.7	31.3	30.8	23.7	24.3	30.9	40.0	41.3	41.5	16.4	17.4	24.3	30.3	28.7	28.9
16.1	17.0	21.1	28.3	26.2	25.5	16.2	17.6	25.3	31.2	30.9	29.7	15.0	15.4	21.9	26.3	24.2	24.2
10.0	12.0	16.8	22.0	17.9	17.0							11.8	12.4	17.1	22.1	17.3	17.3
20.6	20.0	36.1	41.5	42.5	39.8	21.9	21.3	34.9	43.0	46.5	39.0	17.6	17.2	34.9	40.1	42.7	36.8
33.0	35.0	53.9	63.1	57.6	57.3	24.3	26.8	45.3	55.1	47.9	46.3	20.6	21.8	45.7	53.7	41.2	40.4
32.0	31.0	45.5	53.0	53.6	52.3	30.7	32.3	45.3	57.5	54.8	53.3	26.3	25.0	43.2	52.3	51.1	50.2
21.9	21.0	32.5	37.5	39.2	38.5	20.2	21.2	33.5	37.3	37.0	37.6	15.4	16.4	28.0	30.3	25.6	26.8
19.3	16.4	30.0	34.8	37.1	36.1	24.0	24.0	33.5	43.4	45.5	45.1	19.8	19.2	30.7	38.1	37.5	38.2
-----	-----	28.8	31.2	38.4	39.5	-----	-----	30.2	32.3	34.3	35.1	-----	-----	28.3	29.0	33.3	34.3
10.0	10.4	15.2	20.0	25.0	25.0	8.9	8.9	14.0	16.5	17.0	17.0	8.0	8.0	13.8	16.0	16.0	16.0
-----	-----	-----	-----	17.9	17.5	-----	-----	-----	-----	17.0	17.1	-----	-----	-----	-----	16.2	16.5
44.0	39.2	57.5	75.4	79.0	82.1	37.9	37.7	52.0	68.1	71.1	72.9	39.1	38.2	53.6	74.0	74.7	78.2
-----	-----	-----	-----	45.4	45.8	-----	-----	-----	-----	42.4	42.8	-----	-----	-----	-----	42.5	42.9
-----	-----	-----	-----	39.2	38.3	-----	-----	-----	-----	35.0	35.8	-----	-----	-----	-----	34.2	34.4
23.0	23.1	34.4	46.6	41.5	42.3	23.4	23.1	32.8	37.2	42.2	42.8	21.5	21.5	33.6	40.6	40.9	41.7
15.7	14.8	33.2	34.0	36.2	35.0	15.8	15.6	34.1	34.9	37.3	34.8	14.2	13.9	32.8	32.8	34.7	32.7
-----	-----	-----	-----	38.7	37.3	-----	-----	-----	-----	36.7	36.0	-----	-----	-----	-----	35.9	35.8
41.8	37.5	59.0	81.3	67.3	89.1	57.5	63.3	77.5	96.8	102.1	108.6	47.6	51.0	65.0	79.1	79.0	95.3
35.0	32.5	47.1	61.8	60.0	64.2	36.0	34.3	48.0	56.4	64.7	65.1	31.4	28.0	42.6	58.5	59.0	60.4
5.4	5.7	9.9	11.7	9.6	9.6	5.9	6.0	8.6	9.1	9.7	9.6	5.6	5.6	8.7	9.8	10.0	10.0
3.6	3.8	7.0	7.0	7.6	7.6	3.6	4.1	7.5	6.7	8.1	8.4	3.0	3.5	6.1	6.3	7.0	7.4
2.5	2.4	5.0	5.4	5.3	5.3	3.6	3.8	7.9	6.9	7.3	7.4	2.6	2.7	7.5	6.2	6.3	6.6
-----	-----	-----	-----	11.0	11.1	-----	-----	-----	-----	7.9	7.9	-----	-----	-----	-----	7.6	7.8
-----	-----	-----	-----	14.6	14.8	-----	-----	-----	-----	14.0	13.9	-----	-----	-----	-----	12.9	13.0
-----	-----	-----	-----	25.9	26.8	-----	-----	-----	-----	24.7	27.4	-----	-----	-----	-----	24.1	25.4
-----	-----	-----	-----	21.0	20.9	-----	-----	-----	-----	21.9	22.1	-----	-----	-----	-----	19.9	20.3
8.2	7.9	12.7	13.7	17.8	17.7	9.4	9.4	12.0	14.0	17.5	18.1	9.3	9.3	11.5	13.6	17.7	17.5
-----	-----	19.2	17.5	14.0	14.2	-----	-----	18.9	15.6	11.5	11.4	-----	-----	19.3	14.6	11.5	11.5
2.1	1.7	3.3	3.9	5.0	5.1	1.7	1.3	3.5	4.2	3.5	3.9	1.7	1.0	3.1	2.7	3.1	3.9
-----	-----	5.9	4.5	8.4	9.1	-----	-----	5.8	3.4	6.4	9.2	-----	-----	5.4	3.7	6.4	7.8
-----	-----	-----	-----	5.4	6.5	-----	-----	-----	-----	4.5	6.7	-----	-----	-----	-----	4.8	5.5
-----	-----	-----	-----	17.9	18.1	-----	-----	-----	-----	17.5	17.1	-----	-----	-----	-----	13.9	14.1
-----	-----	-----	-----	18.9	19.2	-----	-----	-----	-----	21.0	20.5	-----	-----	-----	-----	18.2	18.7
-----	-----	-----	-----	21.7	21.6	-----	-----	-----	-----	20.1	20.4	-----	-----	-----	-----	17.7	17.9
-----	-----	-----	-----	14.4	14.3	-----	-----	-----	-----	15.8	15.3	-----	-----	-----	-----	16.4	16.5
5.2	6.1	10.9	10.9	20.3	21.4	5.3	5.8	10.1	10.8	10.9	11.0	5.1	5.8	9.7	10.7	11.0	11.2
61.3	61.3	76.4	84.2	87.1	86.2	58.6	58.6	63.7	66.4	66.6	66.7	45.0	45.0	54.2	62.3	66.0	66.4
28.8	28.8	33.1	36.0	49.6	49.8	33.0	32.1	34.4	38.1	52.7	53.3	29.3	29.3	29.5	31.6	46.6	47.0
-----	-----	15.3	16.7	30.0	30.4	-----	-----	17.2	19.6	29.0	28.8	-----	-----	16.7	20.3	28.0	30.4
-----	-----	15.0	17.1	20.9	22.7	-----	-----	15.1	15.8	22.9	23.5	-----	-----	14.1	14.8	20.0	20.8
-----	-----	-----	-----	41.6	42.4	-----	-----	-----	-----	46.9	45.0	-----	-----	-----	-----	42.2	42.3
-----	-----	-----	-----	45.5	42.6	-----	-----	-----	-----	61.7	55.9	-----	-----	-----	-----	58.5	57.9

² 15-16-ounce can.

³ Baked weight.

⁴ 8-ounce package.

⁵ 28-ounce package.

⁶ No. 2 can.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

Article.	Unit.	Chicago, Ill.						Cleveland, Ohio.					
		Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
Sirloin steak.....	Lb.	Cts. 24.1	Cts. 25.3	Cts. 29.2	Cts. 37.0	Cts. 37.0	Cts. 35.9	Cts. 24.6	Cts. 24.3	Cts. 29.7	Cts. 36.3	Cts. 37.1	Cts. 37.7
Round steak.....	Lb.	21.2	21.9	26.0	33.7	32.5	31.7	21.7	21.7	27.8	34.0	33.4	34.3
Rib roast.....	Lb.	19.7	20.4	24.2	30.8	29.6	29.0	18.6	19.4	23.8	28.2	27.8	29.0
Chuck roast.....	Lb.	15.7	17.1	20.5	27.0	24.3	23.5	17.0	17.1	21.7	26.5	24.0	24.2
Plate beef.....	Lb.	11.8	12.9	15.9	20.7	17.0	16.7	12.5	12.3	16.3	19.6	16.7	16.9
Pork chops.....	Lb.	17.9	16.4	29.8	36.4	36.8	33.3	19.4	16.7	32.3	39.7	41.7	37.1
Bacon.....	Lb.	32.0	30.9	49.2	59.5	54.2	52.7	27.9	28.3	46.7	58.4	48.3	47.8
Ham.....	Lb.	31.8	32.8	42.9	53.4	52.3	51.4	36.3	33.5	44.4	57.4	54.2	53.4
Lamb.....	Lb.	19.4	19.7	28.6	33.1	32.9	32.3	18.0	18.9	29.0	31.5	31.9	33.0
Hens.....	Lb.	17.7	16.9	26.5	31.9	33.3	32.0	19.3	18.6	30.8	36.8	37.3	37.3
Salmon (canned).....	Lb.			29.5	32.3	36.2	37.1			27.9	30.1	36.1	36.5
Milk, fresh.....	Qt.	8.0	8.0	11.9	14.0	15.0	15.1	8.0	8.0	12.0	15.0	16.0	16.0
Milk, evaporated (unsweetened).....	(¹)					15.5	16.2					17.1	17.2
Butter.....	Lb.	38.3	36.6	53.0	72.7	73.6	74.4	42.2	40.6	56.4	76.9	79.8	80.4
Oleomargarine.....	Lb.					41.7	41.7					45.5	46.1
Nut margarine.....	Lb.					33.5	33.7					35.5	35.5
Cheese.....	Lb.	25.3	25.7	36.6	43.2	44.6	45.0	24.0	23.5	34.6	39.3	41.9	42.4
Lard.....	Lb.	15.0	14.8	31.9	32.4	34.4	33.4	16.4	15.9	33.0	34.2	36.1	34.4
Crisco.....	Lb.					36.3	36.2					37.6	37.8
Eggs, strictly fresh.....	Doz.	40.0	39.0	58.8	72.8	74.2	82.1	48.0	52.0	66.0	83.6	84.2	98.0
Eggs, storage.....	Doz.	32.0	28.9	43.8	54.0	58.2	60.2	34.3	31.9	44.3	59.6	63.1	63.1
Bread.....	Lb. ²	6.1	6.3	9.0	10.2	10.6	10.7	5.6	5.7	8.8	10.0	9.3	9.6
Flour.....	Lb.	2.9	3.4	6.1	6.3	7.3	7.7	3.1	3.9	6.8	6.6	7.6	7.8
Corn meal.....	Lb.	2.9	2.7	6.9	6.3	6.7	6.6	2.9	3.3	7.6	6.0	6.6	6.3
Rollod oats.....	Lb.					7.1	7.3					9.6	9.4
Corn flakes.....	(³)					13.0	13.3					14.2	14.1
Cream of Wheat.....	(³)					24.4	25.7					24.6	27.9
Macaroni.....	Lb.					18.0	18.3					19.2	19.0
Rice.....	Lb.	9.0	9.3	11.5	13.7	16.7	17.4	9.0	9.5	12.4	14.5	18.4	18.6
Beans, navy.....	Lb.			18.9	15.0	12.0	12.1			19.4	14.3	11.7	11.4
Potatoes.....	Lb.	1.7	1.2	2.6	2.5	3.8	4.1	2.0	1.2	3.0	3.0	4.0	4.2
Onions.....	Lb.			4.4	3.4	6.8	7.6			5.1	3.3	6.8	7.6
Cabbage.....	Lb.					4.6	6.6					4.5	6.1
Beans, baked.....	(³)					16.2	16.5					15.7	15.9
Corn, canned.....	(³)					17.4	17.0					19.3	19.3
Peas, canned.....	(³)					17.5	17.1					18.7	19.1
Tomatoes, canned.....	(³)					15.8	16.0					16.0	16.3
Sugar, granulated.....	Lb.	5.1	5.6	8.4	10.6	13.2	17.1	5.4	6.0	9.4	10.9	12.7	14.1
Tea.....	Lb.	55.0	55.0	59.3	62.4	64.7	67.1	50.0	50.0	62.2	67.2	72.8	74.0
Coffee.....	Lb.	30.7	30.0	28.3	30.6	44.8	45.0	26.5	26.5	29.1	31.7	50.2	50.2
Prunes.....	Lb.			16.0	19.4	28.9	30.0			17.6	19.4	28.3	29.2
Raisins.....	Lb.			14.8	15.5	23.3	26.2			14.6	15.6	22.8	23.8
Bananas.....	Doz.					38.7	37.7					46.4	47.5
Oranges.....	Doz.					52.3	50.5					57.7	56.5

² 8-ounce package.³ Baked weight.¹ 15-16-ounce can.

ON DEC. 15, 1913, 1914, 1917, 1918, 1919, AND NOV. 15, 1919, FOR 19 CITIES—Continued.

Denver, Colo.						Detroit, Mich.						Los Angeles, Calif.					
Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
22.9	22.1	28.3	35.4	33.6	31.8	24.8	23.6	29.6	36.0	36.7	36.7	23.1	23.2	26.6	32.7	31.7	31.5
20.7	21.0	26.2	31.5	29.9	28.8	20.4	20.4	26.8	32.7	32.1	31.8	21.3	21.0	24.0	31.2	28.7	29.5
16.7	17.6	22.3	26.8	25.8	25.3	20.2	19.1	23.7	28.4	29.6	29.2	19.4	20.2	22.3	29.5	26.4	26.5
15.0	15.3	19.7	24.2	21.2	20.7	15.4	15.8	19.3	23.9	22.2	22.0	16.1	15.8	18.8	24.6	19.6	20.5
9.9	9.7	13.9	17.3	14.2	13.9	11.7	11.6	15.4	18.1	16.0	15.9	13.4	13.3	15.8	20.3	16.0	16.4
20.0	19.6	33.9	38.9	42.6	36.0	18.2	17.3	31.8	38.5	41.8	36.4	25.3	25.8	38.0	46.3	46.8	46.6
28.0	30.0	53.6	60.5	53.9	52.2	22.3	24.5	45.6	56.1	46.7	47.0	33.5	34.2	54.4	66.7	57.0	58.8
30.0	30.0	46.7	57.8	55.0	54.8	28.0	28.0	43.0	56.1	53.7	53.3	34.5	35.4	52.9	63.1	59.0	59.4
15.6	16.6	28.6	29.8	28.3	28.3	16.0	16.9	29.0	31.8	33.3	34.4	19.1	19.7	29.5	33.2	30.8	31.6
19.9	18.5	28.1	32.7	35.4	35.0	18.6	17.8	29.8	35.2	36.8	36.7	27.9	26.8	34.8	46.0	46.8	48.2
-----	-----	27.5	30.9	36.1	36.1	-----	-----	29.2	31.6	36.0	36.8	-----	-----	31.7	33.3	45.8	43.5
8.3	8.4	12.0	13.0	12.8	13.0	9.0	9.0	14.0	15.0	16.0	16.0	10.0	10.0	12.0	14.0	16.0	16.0
-----	-----	-----	-----	16.6	16.9	-----	-----	-----	-----	16.5	16.5	-----	-----	-----	-----	14.9	15.1
37.9	39.0	53.3	70.1	74.3	77.2	38.9	38.9	53.9	73.4	76.7	79.4	39.7	39.2	51.7	69.6	74.1	75.2
-----	-----	-----	-----	41.5	45.1	-----	-----	-----	-----	41.8	43.7	-----	-----	-----	-----	45.3	45.5
-----	-----	-----	-----	35.3	35.3	-----	-----	-----	-----	34.4	34.7	-----	-----	-----	-----	36.0	36.0
26.1	26.1	35.9	41.6	45.1	45.0	22.7	22.7	33.9	42.8	43.1	43.4	19.5	20.0	34.2	43.0	44.0	44.6
16.1	15.8	34.5	34.8	38.4	37.9	16.0	15.7	33.6	34.0	36.5	34.9	18.1	17.4	33.0	34.8	34.8	35.2
-----	-----	-----	-----	37.7	37.5	-----	-----	-----	-----	36.9	36.7	-----	-----	-----	-----	36.5	37.9
47.1	40.0	56.4	79.0	75.8	95.8	45.3	41.5	63.4	81.9	80.8	94.0	53.3	50.5	59.1	82.9	83.5	79.8
36.0	31.0	43.8	56.3	62.8	64.7	33.5	29.5	43.6	56.9	50.9	62.4	38.3	34.5	45.6	57.9	63.8	64.3
5.6	5.6	9.7	11.8	11.2	11.0	5.6	5.9	8.4	9.5	10.1	10.9	6.0	6.6	8.3	9.1	9.7	10.0
2.6	3.0	5.5	6.0	6.2	6.8	3.1	3.5	6.4	6.5	7.4	7.8	3.5	4.0	6.3	7.1	7.3	7.4
2.5	2.7	6.1	5.7	5.9	6.1	2.8	3.1	8.4	6.5	7.2	6.7	3.5	3.7	7.7	7.1	7.5	7.5
-----	-----	-----	-----	8.7	8.9	-----	-----	-----	-----	8.3	8.0	-----	-----	-----	-----	8.7	8.7
-----	-----	-----	-----	14.6	14.8	-----	-----	-----	-----	14.2	13.8	-----	-----	-----	-----	13.0	13.1
-----	-----	-----	-----	24.8	27.4	-----	-----	-----	-----	25.0	27.2	-----	-----	-----	-----	24.4	28.0
-----	-----	-----	-----	19.3	19.3	-----	-----	-----	-----	19.6	19.9	-----	-----	-----	-----	16.9	17.2
8.6	8.6	11.4	14.6	17.8	17.6	8.4	8.4	11.7	14.0	18.5	18.4	7.7	8.0	10.7	13.8	16.5	17.0
-----	-----	18.4	15.2	13.1	13.1	-----	-----	18.5	14.0	11.3	11.4	-----	-----	16.7	14.8	10.6	10.2
1.6	1.2	2.5	2.7	4.1	4.4	1.6	1.1	2.7	2.5	3.5	4.0	1.9	1.8	2.7	3.1	4.1	5.2
-----	-----	4.9	3.7	7.1	7.8	-----	-----	5.3	3.9	6.6	8.2	-----	-----	3.4	3.3	6.1	7.0
-----	-----	-----	-----	3.9	6.8	-----	-----	-----	-----	4.1	7.2	-----	-----	-----	-----	3.0	4.8
-----	-----	-----	-----	17.7	17.6	-----	-----	-----	-----	16.2	16.2	-----	-----	-----	-----	17.7	17.9
-----	-----	-----	-----	18.2	18.4	-----	-----	-----	-----	19.3	19.5	-----	-----	-----	-----	18.5	18.6
-----	-----	-----	-----	19.5	19.9	-----	-----	-----	-----	18.6	18.6	-----	-----	-----	-----	18.9	19.0
-----	-----	-----	-----	15.2	15.3	-----	-----	-----	-----	16.9	16.6	-----	-----	-----	-----	15.3	13.9
5.2	5.9	8.8	11.8	12.6	13.2	5.1	6.0	8.6	10.8	13.0	14.6	5.3	5.9	8.5	10.6	12.4	13.9
52.8	52.8	57.6	64.8	70.0	70.6	43.3	43.3	54.9	63.6	64.0	67.3	54.5	54.5	60.0	70.3	69.1	69.8
29.4	29.4	29.5	31.7	49.8	50.1	29.3	30.0	29.3	31.5	49.0	48.9	36.3	36.3	30.3	31.7	45.0	45.4
-----	-----	17.0	19.9	29.6	29.9	-----	-----	16.0	18.5	31.9	30.4	-----	-----	15.0	20.4	27.0	27.2
-----	-----	14.2	15.9	23.6	23.7	-----	-----	13.9	15.6	23.5	23.8	-----	-----	14.8	15.6	21.0	22.3
-----	-----	-----	-----	43.5	43.3	-----	-----	-----	-----	36.3	34.0	-----	-----	-----	-----	41.7	42.0
-----	-----	-----	-----	53.6	53.0	-----	-----	-----	-----	54.0	53.8	-----	-----	-----	-----	38.9	46.9

* 28-ounce package.

* No. 2 can.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

Article.	Unit.	Milwaukee, Wis.						New Orleans, La.					
		Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.
		1913	1914	1917	1918			1913	1914	1917	1918		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	23.4	23.3	28.7	34.5	34.6	35.0	21.5	22.5	27.1	32.9	31.3	31.6
Round steak.....	Lb.	21.6	21.7	27.5	33.4	32.7	32.8	19.1	20.1	23.7	29.6	28.1	29.1
Rib roast.....	Lb.	18.8	18.5	23.3	28.3	27.8	28.2	18.5	18.4	23.7	28.8	27.8	28.7
Chuck roast.....	Lb.	16.4	16.8	21.6	26.1	24.4	24.8	15.4	14.1	18.0	21.9	20.6	21.4
Plate beef.....	Lb.	12.1	12.8	15.8	20.0	17.0	17.4	12.0	12.5	15.7	20.2	17.9	19.5
Pork chops.....	Lb.	17.4	16.7	30.1	37.3	37.3	33.0	24.0	24.2	36.4	43.2	45.2	42.7
Bacon.....	Lb.	27.4	27.3	48.8	57.8	50.9	50.2	30.4	31.6	51.4	63.7	52.3	52.0
Ham.....	Lb.	27.8	27.7	44.1	53.1	50.0	50.5	27.0	27.0	42.4	50.6	46.3	48.5
Lamb.....	Lb.	18.5	19.2	29.6	33.7	32.3	32.7	20.5	20.6	29.9	36.8	37.3	38.2
Hens.....	Lb.	17.2	17.2	25.9	33.8	30.3	31.6	22.0	22.3	30.3	37.0	42.7	41.9
Salmon (canned).....	Lb.	.....	.....	27.4	31.6	36.9	35.3	.....	.....	32.3	34.5	36.7	37.0
Milk, fresh.....	Qt.	7.0	7.0	11.0	13.0	13.0	13.0	9.8	9.8	13.8	16.0	18.5	18.5
Milk, evaporated (unsweetened) (2).....	.....	.....	.....	.....	.....	17.1	17.0	.....	.....	.....	.....	16.5	16.6
Butter.....	Lb.	38.8	37.8	53.1	74.1	76.3	77.2	39.8	39.3	55.0	75.2	76.1	80.7
Oleomargarine.....	Lb.	.....	.....	.....	.....	42.8	43.1	.....	.....	.....	.....	44.3	45.9
Nut margarine.....	Lb.	.....	.....	.....	.....	35.1	33.8	.....	.....	.....	.....	36.2	36.1
Cheese.....	Lb.	22.3	22.3	33.8	44.9	42.0	41.6	21.9	22.8	34.8	45.4	42.9	43.2
Lard.....	Lb.	16.0	15.8	33.1	35.3	36.7	34.7	15.0	13.8	33.3	35.1	36.4	35.9
Crisco.....	Lb.	.....	.....	.....	.....	36.8	37.1	.....	.....	.....	.....	39.1	39.2
Eggs, strictly fresh.....	Doz.	40.0	37.5	57.9	71.3	73.5	87.2	34.0	39.3	53.0	72.5	69.3	80.9
Eggs, storage.....	Doz.	33.0	29.0	41.6	51.8	58.6	60.3	30.0	30.0	42.5	56.6	61.0	64.0
Bread.....	Lb. ³	5.7	6.3	9.7	9.2	10.0	10.0	5.0	5.4	8.3	9.2	9.2	9.1
Flour.....	Lb.	3.0	3.8	6.2	6.5	7.5	8.0	3.7	4.0	7.7	7.3	7.5	7.6
Corn meal.....	Lb.	3.2	3.8	7.6	6.6	6.4	6.5	2.7	2.9	7.0	5.9	5.5	5.5
Rolled oats.....	Lb.	.....	.....	.....	.....	8.2	8.2	.....	.....	.....	.....	8.9	9.0
Corn flakes.....	(⁴)	.....	.....	.....	.....	14.2	14.2	.....	.....	.....	.....	14.4	14.5
Cream of Wheat.....	(⁵)	.....	.....	.....	.....	25.4	28.2	.....	.....	.....	.....	24.8	27.4
Macaroni.....	Lb.	.....	.....	.....	.....	18.4	18.8	.....	.....	.....	.....	11.3	12.0
Rice.....	Lb.	9.0	9.5	11.6	14.4	17.7	18.0	7.5	7.5	10.8	12.2	15.1	15.4
Beans, navy.....	Lb.	.....	.....	19.4	14.3	11.5	11.0	.....	.....	17.6	15.1	11.6	11.7
Potatoes.....	Lb.	1.7	1.3	2.7	2.7	3.6	4.2	2.2	2.0	3.7	3.9	4.9	5.1
Onions.....	Lb.	.....	.....	4.8	3.5	7.3	8.1	.....	.....	4.7	4.0	6.7	8.2
Cabbage.....	Lb.	.....	.....	.....	.....	3.4	7.0	.....	.....	.....	.....	4.5	4.3
Beans, baked.....	(⁶)	.....	.....	.....	.....	16.2	15.9	.....	.....	.....	.....	17.2	17.1
Corn, canned.....	(⁶)	.....	.....	.....	.....	17.8	17.8	.....	.....	.....	.....	17.8	18.0
Peas, canned.....	(⁶)	.....	.....	.....	.....	17.8	17.4	.....	.....	.....	.....	17.8	18.6
Tomatoes, canned.....	(⁶)	.....	.....	.....	.....	16.4	16.6	.....	.....	.....	.....	15.1	15.4
Sugar, granulated.....	Lb.	5.5	6.0	8.7	11.5	13.7	14.4	5.1	6.0	9.7	10.4	11.1	12.2
Tea.....	Lb.	50.0	50.0	58.6	66.2	69.1	68.0	62.1	62.1	62.1	63.9	68.6	70.7
Coffee.....	Lb.	27.5	27.5	26.5	28.8	47.5	47.6	25.0	25.7	26.6	28.6	42.5	42.2
Prunes.....	Lb.	.....	.....	15.9	17.2	28.6	28.8	.....	.....	16.6	18.1	31.3	30.5
Raisins.....	Lb.	.....	.....	14.8	15.3	22.8	25.1	.....	.....	15.2	16.8	22.2	23.6
Bananas.....	Doz.	.....	.....	.....	.....	39.3	40.0	.....	.....	.....	.....	25.0	25.0
Oranges.....	Doz.	.....	.....	.....	.....	58.6	58.9	.....	.....	.....	.....	41.0	45.8

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

ON DEC. 15, 1913, 1914, 1917, 1918, 1919, AND NOV. 15, 1919, FOR 19 CITIES—Continued.

New-York, N. Y.						Philadelphia, Pa.						Pittsburgh, Pa.					
Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
25.7	26.2	33.5	43.0	42.5	42.7	30.0 ¹	30.3 ¹	35.2 ¹	49.5 ¹	49.3 ¹	49.1	27.0	27.5	34.4	45.6	45.2	43.6
25.3	25.9	34.2	45.4	44.4	44.5	26.0	26.3	37.0	46.4	45.0	44.9	22.8	24.0	31.8	42.6	40.8	39.3
21.3	21.5	28.5	39.6	37.6	37.8	21.8	21.8	28.8	37.5	38.0	38.5	21.8	21.3	26.5	34.9	34.8	34.3
15.8	16.6	22.2	31.0	27.6	27.6	17.8	18.2	24.9	31.8	29.3	29.4	16.7	17.2	23.2	30.1	28.2	27.4
14.5	15.5	21.8	26.7	24.7	24.8	12.1	11.8	17.6	22.1	17.5	17.7	12.7	13.2	16.9	21.8	18.2	17.5
18.4	20.8	34.5	42.7	46.7	41.0	20.6	19.4	35.4	43.8	43.1	39.5	20.8	20.0	34.8	40.4	44.6	38.8
25.5	26.3	46.1	55.2	48.0	47.7	25.0	27.1	46.6	58.0	51.3	49.4	28.8	30.4	50.2	61.6	54.9	53.6
29.0	29.5	32.5	55.4	56.3	56.0	29.1	30.7	48.6	57.6	56.7	56.1	29.0	31.0	46.1	58.6	57.7	57.0
15.4	16.4	27.7	29.4	29.3	28.8	18.8	19.2	30.6	36.5	39.2	39.2	20.7	20.7	31.4	36.5	39.1	37.7
20.7	20.7	30.7	40.1	39.9	40.1	22.6	22.9	32.3	41.9	44.1	44.5	24.8	24.0	35.7	44.8	43.6	43.1
-----	-----	34.6	35.2	42.4	41.9	-----	-----	26.1	29.6	32.5	34.0	-----	-----	31.1	31.2	36.3	36.8
9.0	9.0	14.0	17.0	17.7	18.0	8.0	8.0	12.2	14.0	14.0	14.0	9.2	9.3	12.7	15.0	16.0	16.0
-----	-----	-----	-----	15.8	16.1	-----	-----	-----	-----	16.2	16.5	-----	-----	-----	-----	16.4	16.7
41.1	40.5	54.8	76.2	77.9	80.6	46.6	45.0	59.3	78.9	81.9	87.6	42.0	40.4	56.9	76.3	78.5	81.8
-----	-----	-----	-----	42.3	41.6	-----	-----	-----	-----	45.7	45.2	-----	-----	-----	-----	43.4	43.5
-----	-----	-----	-----	34.5	34.5	-----	-----	-----	-----	38.0	37.5	-----	-----	-----	-----	35.8	35.6
20.2	20.4	34.6	40.4	42.9	43.1	25.0	25.5	37.0	41.9	45.9	46.4	24.5	25.0	34.9	43.6	43.5	43.7
16.1	15.8	33.7	34.1	36.3	34.3	15.2	14.8	33.8	33.9	35.7	33.5	15.6	15.4	34.1	34.4	36.6	35.0
-----	-----	-----	-----	36.9	36.6	-----	-----	-----	-----	35.2	35.3	-----	-----	-----	-----	37.4	37.4
54.3	53.8	73.1	90.3	88.1	101.3	48.3	50.9	66.3	82.8	82.9	96.1	49.2	46.4	64.4	80.3	78.6	94.4
36.7	33.5	47.1	60.4	62.5	65.2	34.7	33.3	44.9	62.4	62.8	64.5	35.1	30.5	45.1	60.8	60.9	63.4
6.1	6.3	8.8	9.9	10.0	10.0	4.8	5.0	8.6	9.4	9.4	9.4	5.4	5.6	9.1	10.0	10.3	10.3
3.2	3.7	7.6	6.9	7.7	8.1	3.1	3.7	7.3	6.5	7.4	7.6	3.2	3.7	7.0	6.7	7.6	7.9
3.4	3.6	8.5	7.5	7.6	7.7	2.8	2.9	7.1	6.3	6.5	6.4	3.0	3.1	9.0	7.2	7.3	7.6
-----	-----	-----	-----	7.9	8.1	-----	-----	-----	-----	8.3	8.4	-----	-----	-----	-----	9.5	9.0
-----	-----	-----	-----	12.1	12.1	-----	-----	-----	-----	12.4	12.3	-----	-----	-----	-----	13.8	13.8
-----	-----	-----	-----	24.2	26.0	-----	-----	-----	-----	24.7	27.1	-----	-----	-----	-----	25.1	27.6
-----	-----	-----	-----	21.0	21.0	-----	-----	-----	-----	20.7	22.0	-----	-----	-----	-----	17.7	19.3
8.0	8.3	11.7	13.9	16.7	16.9	9.8	10.0	12.3	14.7	18.1	18.7	9.2	9.2	12.1	14.5	18.6	18.5
-----	-----	18.6	15.8	12.6	12.3	-----	-----	18.7	15.0	11.9	12.2	-----	-----	20.0	15.3	12.1	12.3
2.4	2.0	3.8	4.0	4.4	4.7	2.3	1.9	3.6	4.3	4.5	4.5	1.9	1.3	3.1	3.1	3.9	4.2
-----	-----	5.8	4.3	6.8	8.3	-----	-----	5.6	3.7	6.8	8.3	-----	-----	4.9	4.0	7.2	8.4
-----	-----	-----	-----	4.2	5.5	-----	-----	-----	-----	5.3	6.8	-----	-----	-----	-----	4.6	6.2
-----	-----	-----	-----	15.3	15.2	-----	-----	-----	-----	14.6	14.8	-----	-----	-----	-----	16.3	16.1
-----	-----	-----	-----	19.2	18.6	-----	-----	-----	-----	18.0	18.0	-----	-----	-----	-----	18.8	18.8
-----	-----	-----	-----	18.0	18.5	-----	-----	-----	-----	18.5	18.9	-----	-----	-----	-----	19.1	18.9
-----	-----	-----	-----	16.0	16.2	-----	-----	-----	-----	15.7	15.6	-----	-----	-----	-----	15.1	15.3
4.9	5.4	9.9	10.4	10.8	11.9	5.0	5.5	9.7	10.2	10.8	11.0	5.5	6.2	9.7	10.9	12.1	12.6
43.3	43.3	51.5	53.9	57.0	57.1	54.0	54.0	57.1	59.0	61.6	64.0	58.0	60.0	72.0	80.1	82.6	81.9
27.2	26.3	27.5	30.5	45.1	45.1	24.5	24.5	27.9	29.6	44.5	45.1	30.0	29.3	29.7	32.0	50.0	49.6
-----	-----	17.4	22.5	31.7	29.6	-----	-----	16.6	20.6	30.3	29.6	-----	-----	17.2	22.1	31.0	31.7
-----	-----	15.1	15.5	22.2	23.4	-----	-----	13.5	14.6	21.2	22.6	-----	-----	14.8	15.5	24.5	25.4
-----	-----	-----	-----	38.2	37.7	-----	-----	-----	-----	40.0	41.4	-----	-----	-----	-----	47.9	45.0
-----	-----	-----	-----	61.0	56.0	-----	-----	-----	-----	57.1	52.5	-----	-----	-----	-----	53.2	50.5

² 15-16-ounce can.³ Baked weight.⁴ 8-ounce package.⁵ 28-ounce package.⁶ No. 2 can.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

Article.	Unit.	St. Louis, Mo.						San Francisco, Calif.					
		Dec. 15—				Nov. 15, 1919.		Dec. 15 -				Nov. 15, 1919.	
		1913	1914	1917	1918	1919.	1919.	1913	1914	1917	1918	1919.	1919.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	26.6	27.3	29.9	36.7	34.5	34.8	21.0	20.9	23.8	32.2	29.1	30.1
Round steak.....	Lb.	23.6	25.0	28.9	35.6	34.5	34.4	20.0	20.3	23.6	31.6	28.1	29.0
Rib roast.....	Lb.	19.5	20.0	25.2	30.3	28.6	28.4	21.7	21.4	22.7	30.2	28.7	29.3
Chuck roast.....	Lb.	15.9	16.0	20.4	25.2	20.8	20.8	15.0	15.1	16.8	23.8	20.4	21.1
Plate beef.....	Lb.	12.8	14.2	16.8	21.1	17.5	17.4	15.0	14.4	16.3	22.0	17.3	18.1
Pork chops.....	Lb.	17.8	17.5	29.1	38.3	36.7	31.8	24.2	23.4	36.2	44.0	43.2	44.7
Bacon.....	Lb.	25.0	25.0	47.7	55.3	48.2	46.1	34.4	37.1	53.2	63.0	59.1	59.2
Ham.....	Lb.	27.3	27.5	45.1	55.5	52.1	49.5	34.0	33.0	48.6	59.1	55.7	57.7
Lamb.....	Lb.	18.3	19.3	29.4	32.4	32.2	31.9	16.6	18.8	28.1	34.9	31.4	32.3
Hens.....	Lb.	17.3	17.3	26.5	31.5	31.9	31.7	24.5	24.2	34.9	47.3	47.9	49.7
Salmon (canned).....	Lb.			28.7	32.4	34.2	34.2			25.2	28.3	33.4	33.4
Milk, fresh.....	Qt.	8.8	8.8	13.0	14.0	16.0	16.0	10.0	10.0	12.1	14.0	15.0	15.3
Milk, evaporated (unsweetened). (1)						16.2	16.4					15.2	15.2
Butter.....	Lb.	39.6	39.5	55.9	75.5	78.5	81.7	38.6	37.5	53.8	70.6	74.3	75.5
Oleomargarine.....	Lb.					40.5	41.0					38.5	38.2
Nut margarine.....	Lb.					35.0	34.7					35.6	35.3
Cheese.....	Lb.	20.7	22.3	35.1	44.0	41.3	41.5	21.0	21.0	32.9	40.1	44.4	44.8
Lard.....	Lb.	12.7	12.5	29.6	31.6	31.5	28.3	18.0	17.9	33.4	34.2	36.8	37.4
Crisco.....	Lb.					35.8	35.5					38.9	39.2
Eggs, strictly fresh.....	Doz.	40.8	37.0	58.4	71.9	71.9	80.2	53.3	52.0	59.6	85.0	88.7	83.9
Eggs, storage.....	Doz.	28.8	29.0	42.8	56.6	57.8	59.5	41.7	35.0	44.1	56.6	60.8	64.4
Bread.....	Lb. ²	5.6	6.0	9.9	10.0	10.0	10.0	5.9	6.0	9.6	10.0	11.7	11.7
Flour.....	Lb.	2.9	3.4	6.1	6.3	6.9	7.3	3.4	3.9	6.2	7.0	7.2	7.3
Corn meal.....	Lb.	2.6	2.6	6.2	5.1	5.5	5.5	3.5	3.7	7.0	7.1	7.2	6.9
Rollod oats.....	Lb.					6.4	6.4					8.5	8.9
Corn flakes.....	(³)					13.2	13.2					14.2	14.0
Cream of Wheat.....	(³)					24.4	28.7					24.6	26.2
Macaroni.....	Lb.					18.1	18.1					15.8	15.6
Rice.....	Lb.	8.2	8.9	11.1	13.7	16.8	17.2	8.5	8.5	11.2	13.8	16.0	16.8
Beans, navy.....	Lb.			18.3	14.4	11.7	11.6			16.3	13.6	9.8	9.8
Potatoes.....	Lb.	1.7	1.3	3.0	2.9	4.1	4.4	1.9	1.7	2.9	3.0	3.6	4.5
Onions.....	Lb.			4.5	3.9	6.8	8.2			3.0	2.7	5.2	6.3
Cabbage.....	Lb.					4.2	5.9						
Beans, baked.....	(³)					15.3	15.5					18.6	18.0
Corn, canned.....	(³)					16.7	16.5					18.0	18.5
Peas, canned.....	(³)					15.9	16.1					17.5	18.6
Tomatoes, canned.....	(³)					15.0	14.9					13.4	13.3
Sugar, granulated.....	Lb.	5.1	5.6	8.6	11.1	13.0	18.6	5.4	5.9	8.1	10.7	10.8	11.9
Tea.....	Lb.	55.0	55.8	63.6	71.8	72.0	72.0	50.0	50.0	53.9	57.5	58.9	58.5
Coffee.....	Lb.	24.4	24.8	28.0	30.4	46.7	45.5	32.0	32.0	30.1	31.5	44.7	44.5
Prunes.....	Lb.			16.6	19.8	30.2	29.3			13.9	17.0	22.4	23.3
Raisins.....	Lb.			16.7	18.2	22.6	21.3			13.7	14.2	20.3	21.9
Bananas.....	Doz.					36.0	35.6					46.0	43.0
Oranges.....	Doz.					44.4	46.0					57.7	55.2

¹ 15-16 ounce can.² Baked weight.³ 8-ounce package.

ON DEC. 15, 1913, 1914, 1917, 1918, 1919, AND NOV. 15, 1919, FOR 19 CITIES—Concluded.

Seattle, Wash.						Washington, D. C.					
Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.	Dec. 15—				Nov. 15, 1919.	Dec. 15, 1919.
1913	1914	1917	1918			1913	1914	1917	1918		
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
23.6	22.8	26.7	36.3	35.2	35.7	26.5	27.0	36.3	50.1	47.9	47.1
20.6	20.6	25.3	35.4	32.6	33.7	22.6	23.9	34.5	46.5	43.3	42.8
20.0	18.8	22.0	31.1	28.5	29.2	21.9	20.7	28.5	39.2	37.0	36.2
15.6	14.9	18.3	25.1	22.2	23.1	17.3	17.9	24.9	34.3	29.0	27.8
12.9	12.5	15.5	20.6	17.8	18.5	12.4	12.8	18.5	23.4	18.6	18.0
24.0	23.4	38.3	47.6	45.1	45.0	19.9	19.6	37.0	46.0	45.2	39.8
33.0	33.0	52.4	63.3	59.2	59.4	24.9	25.9	49.6	58.7	50.0	47.9
30.0	38.8	44.3	56.6	56.5	57.2	29.0	29.5	46.8	58.2	56.3	55.2
18.0	18.6	30.1	35.1	32.2	33.1	19.4	20.8	35.1	41.7	39.0	38.7
24.6	21.2	29.4	40.1	42.3	43.4	22.0	20.3	32.9	43.0	45.3	42.9
9.8	9.5	28.8	30.8	34.2	35.3	9.0	9.0	28.5	33.9	34.5	35.2
43.8	39.3	12.5	15.7	15.0	15.0	42.3	41.4	14.0	17.0	18.0	18.0
				15.5	15.2					16.5	16.9
				74.5	76.4			57.0	77.0	78.1	82.6
				40.4	40.6					42.6	42.5
				36.7	36.7					35.5	35.1
22.3	21.6	30.5	41.2	43.0	43.1	23.5	23.5	35.6	44.5	42.5	42.7
16.9	16.1	32.0	33.6	39.1	38.6	15.0	14.3	33.5	34.9	36.1	34.1
				42.1	42.0					37.7	37.5
54.2	50.4	60.5	83.6	90.1	83.4	42.1	46.1	67.9	81.8	84.3	97.4
37.0	35.6	48.4	58.6	66.6	66.4	35.0	31.0	46.2	61.5	62.1	64.4
6.6	6.2	9.8	10.8	11.5	11.5	5.5	5.7	9.3	10.1	9.9	10.1
2.9	3.5	5.8	6.7	6.8	6.9	3.8	4.1	7.2	6.8	7.7	8.1
3.3	3.4	7.5	7.3	7.3	7.3	2.6	2.8	6.9	5.6	5.6	5.5
				8.7	8.6					10.7	10.7
				14.9	14.9					14.0	14.0
				27.5	28.8					24.8	26.6
				16.3	16.4					20.4	20.7
7.7	8.2	10.8	14.0	18.3	19.0	9.4	9.4	12.3	14.5	18.1	18.2
		18.3	15.8	11.9	11.6			19.9	15.0	12.6	12.6
1.5	1.2	2.0	2.4	3.7	4.2	1.8	1.3	3.3	3.0	3.7	3.9
		4.2	3.9	7.1	7.7			4.8	3.5	6.7	7.4
				4.9	6.3					4.5	6.1
				21.6	21.8					14.7	14.8
				20.2	20.4					18.9	19.0
				20.7	20.4					19.0	18.6
				17.6	17.5					17.4	17.4
6.1	6.4	8.8	10.9	11.6	12.8	5.0	5.6	9.7	10.5	11.5	13.6
50.0	50.0	54.8	62.3	63.2	63.6	57.5	57.5	61.2	72.3	75.9	75.9
28.0	30.0	31.0	32.0	48.2	48.1	28.8	28.8	28.5	31.4	47.7	47.5
		14.5	18.5	27.7	28.4			17.5	21.4	31.3	31.9
		14.5	15.7	22.4	24.4			14.9	16.7	22.8	24.3
				52.1	52.5					44.8	43.6
				56.6	58.1					57.6	49.8

* 28-ounce package.

* No. 2 can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.		Columbus, Ohio.	
		Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	51.1	49.9	31.8	32.7	37.7	37.8	30.4	30.6	35.9	34.7
Round steak.....	Lb.	46.9	47.1	27.1	27.9	37.2	37.0	29.5	29.1	32.9	32.7
Rib roast.....	Lb.	37.3	37.0	24.1	25.4	30.0	30.5	25.7	25.7	28.7	29.4
Chuck roast.....	Lb.	29.2	29.1	17.9	19.6	25.4	25.2	19.1	18.7	25.1	25.4
Plate beef.....	Lb.	15.9	14.7	12.7	13.8	18.8	19.0	17.4	17.4	18.5	18.1
Pork chops.....	Lb.	45.0	38.5	40.9	38.3	44.7	43.7	38.1	34.2	37.3	33.1
Bacon.....	Lb.	54.8	55.0	60.0	58.9	55.4	54.3	44.8	42.5	49.1	45.2
Ham.....	Lb.	59.8	59.5	59.5	60.0	53.0	52.0	49.5	48.0	51.6	49.3
Lamb.....	Lb.	35.4	35.1	26.9	27.7	41.1	40.4	29.4	30.6	30.0	33.3
Hens.....	Lb.	43.5	43.6	30.6	31.3	47.9	47.9	36.6	37.0	32.1	34.4
Salmon (canned).....	Lb.	37.9	39.0	43.2	45.0	33.1	31.7	35.5	35.7	31.9	35.0
Milk, fresh.....	Qt.	18.0	18.5	15.6	15.6	21.7	25.0	15.0	15.0	14.7	14.0
Milk, evaporated (unsweetened).....	(²)	16.6	17.0	18.3	18.5	16.9	17.2	16.2	16.4	16.5	16.8
Butter.....	Lb.	69.7	71.5	70.2	74.5	73.6	76.4	76.4	77.9	77.2	78.0
Oleomargarine.....	Lb.	41.3	43.3	46.3	.....	45.0	45.7	42.0	42.1	42.7	42.7
Nut margarine.....	Lb.	35.4	35.4	.....	.....	45.7	45.7	34.6	34.5	35.2	35.3
Cheese.....	Lb.	43.2	43.2	45.4	46.1	41.9	42.6	43.4	43.7	43.0	43.2
Lard.....	Lb.	35.6	33.8	38.6	39.0	38.3	38.0	32.1	29.8	34.2	32.4
Crisco.....	Lb.	36.3	36.3	44.0	43.5	39.0	38.7	35.1	34.8	36.5	36.7
Eggs, strictly fresh.....	Doz.	96.3	111.0	87.1	90.0	68.6	76.7	74.0	80.5	77.2	85.3
Eggs, storage.....	Doz.	62.2	66.3	62.8	63.9	57.0	58.3	59.3	60.7	60.6	59.6
Bread.....	Lb. ³	10.4	10.4	12.4	12.3	10.0	10.0	9.9	9.9	9.8	9.8
Flour.....	Lb.	7.4	8.0	8.1	8.7	7.7	7.8	7.4	7.7	6.9	7.1
Corn meal.....	Lb.	8.8	8.5	8.0	7.8	5.3	5.2	5.5	5.5	5.8	5.9
Rolled oats.....	Lb.	9.7	10.0	9.4	9.1	10.4	10.4	7.3	7.6	10.2	9.5
Cornflakes.....	(⁴)	13.5	13.7	14.5	14.6	14.9	14.9	13.9	13.8	11.1	11.2
Cream of Wheat.....	(⁵)	23.8	26.8	30.0	31.2	25.0	27.7	24.8	26.5	24.9	27.0
Macaroni.....	Lb.	23.0	23.5	20.3	20.4	20.9	20.7	17.1	16.7	19.8	19.4
Rice.....	Lb.	17.0	17.4	16.7	17.8	14.8	14.7	17.8	17.7	18.2	17.5
Beans, navy.....	Lb.	11.5	12.1	12.9	13.0	14.8	14.7	10.7	10.6	11.3	11.1
Potatoes.....	Lb.	3.5	3.9	3.5	3.9	4.7	4.6	4.3	4.4	4.1	4.3
Onions.....	Lb.	6.3	8.6	6.5	7.6	7.9	9.1	6.5	6.7	7.4	8.6
Cabbage.....	Lb.	4.4	6.2	5.1	5.3	5.9	6.5	4.5	6.0	5.1	6.9
Beans, baked.....	(⁶)	16.2	16.4	22.2	22.1	15.4	15.3	15.7	15.9	16.6	17.1
Corn, canned.....	(⁶)	21.3	21.2	18.8	18.9	21.0	20.7	16.7	16.5	16.5	16.0
Peas, canned.....	(⁶)	20.0	20.9	18.8	19.0	21.8	21.9	17.1	17.1	16.5	16.5
Tomatoes, canned.....	(⁶)	16.2	17.6	17.9	18.7	15.6	15.7	15.3	15.4	15.2	15.3
Sugar, granulated.....	Lb.	11.0	11.3	13.7	14.1	11.1	14.0	14.4	18.7	12.6	16.6
Tea.....	Lb.	60.8	61.4	75.3	78.1	81.3	81.3	77.1	75.8	82.1	81.9
Coffee.....	Lb.	47.6	47.2	57.9	58.9	48.4	48.6	42.6	43.0	49.3	49.4
Prunes.....	Lb.	29.2	29.2	26.5	26.5	30.0	29.6	28.3	27.7	31.5	29.6
Raisins.....	Lb.	23.0	23.8	21.5	24.1	22.5	23.0	22.1	24.1	24.2	24.5
Bananas.....	Poz.	40.6	40.0	47.5	50.0	44.0	46.0	39.0	37.7	42.1	40.0
Oranges.....	Doz.	61.2	54.4	56.6	58.8	47.0	49.1	41.9	37.9	53.1	56.7

¹ The steak for which prices are here quoted is known as sirloin in most of the cities included in this report, but in this city is called "rump" steak.

PRICES AND COST OF LIVING.

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OF FOOD FOR 31 CITIES ON NOV. 15 AND DEC. 15, 1919.

Dallas, Tex.		Fall River, Mass.		Houston, Tex.		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.	
Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
36.9	37.2	35.9	38.6	32.8	33.1	35.2	33.9	38.8	38.6	34.5	34.3
36.6	35.3	47.1	46.4	32.8	32.0	34.4	31.2	36.1	34.2	31.5	30.5
31.3	30.6	34.4	34.0	26.7	27.2	26.9	26.0	28.5	27.8	25.7	26.1
26.4	26.8	26.6	26.4	22.5	23.3	24.3	23.5	22.8	22.5	19.8	20.2
22.9	23.4			13.8	18.6	17.4	17.1	16.1	15.7	15.0	14.5
44.8	39.8	43.9	37.0	41.8	39.2	39.6	36.0	43.7	39.7	37.4	33.5
53.6	52.8	48.9	47.9	61.2	60.9	49.3	47.9	52.9	51.6	52.7	53.2
57.1	51.4	52.6	51.1	50.0	50.0	53.4	53.1	50.8	51.7	53.2	52.5
32.5	35.0	33.0	32.1	35.6	37.5	35.0	37.5	34.3	32.9	29.1	29.4
35.3	36.0	46.3	46.0	37.8	37.8	34.4	34.0	43.4	40.4	33.8	34.4
39.3	38.5	33.6	34.4	33.8	33.2	28.3	29.2	37.5	38.0	33.1	34.6
21.0	21.0	15.7	16.0	20.0	21.4	14.0	14.0	20.0	22.0	16.0	16.0
18.1	18.2	16.6	16.6	16.5	16.5	17.2	17.4	16.8	17.3	17.7	17.7
71.8	75.2	68.9	70.9	74.3	75.5	75.7	77.9	77.1	79.7	76.4	80.5
37.0	36.8	41.4	40.8	42.9	43.6	44.1	44.5	43.6	44.4	41.3	41.5
36.3	36.4	36.5	36.2	37.3	37.0	35.6	35.4	39.0	38.5	35.4	35.6
43.4	43.7	42.6	42.9	39.6	41.9	45.1	45.6	41.2	43.5	44.4	43.9
36.8	36.6	35.6	32.8	33.7	34.8	34.0	31.9	35.6	36.0	38.3	35.8
36.8	36.5	36.9	36.6	33.8	33.6	37.5	37.0	38.4	39.6	39.8	39.8
65.0	65.0	106.3	109.8	67.7	82.5	74.7	88.8	76.3	77.5	70.9	84.2
61.3	66.8	63.1	64.1	56.6	61.8	59.4	59.6	60.0	62.7	59.3	63.5
10.0	10.0	10.9	10.9	9.2	9.2	9.7	9.7	10.0	10.0	10.0	10.0
7.6	7.8	7.7	8.3	7.4	7.5	7.1	7.4	7.7	7.9	7.0	7.5
6.9	6.8	8.8	8.4	6.0	6.0	5.6	5.8	5.5	5.5	6.9	7.0
10.9	10.9	9.8	9.8	9.8	9.9	10.0	9.9	10.8	11.3	11.6	12.0
13.9	14.1	14.2	14.5	14.6	14.5	14.7	14.9	15.0	14.8	15.0	15.0
27.0	29.4	25.5	27.6	24.8	27.0	25.4	28.8	25.2	27.8	25.9	27.9
19.9	19.9	22.9	23.5	20.1	19.9	21.5	20.6	20.6	20.4	19.0	18.7
18.6	18.0	17.3	17.8	16.1	15.4	19.4	19.6	16.1	16.5	18.7	18.7
13.7	14.1	12.1	12.1	12.4	12.5	11.9	12.0	13.9	13.9	12.3	12.5
5.1	5.4	3.5	3.8	4.6	4.8	3.9	4.4	4.8	4.8	4.3	4.8
7.1	7.8	7.1	8.9	6.9	7.4	7.6	8.2	8.0	8.4	7.9	9.1
6.3	6.6	4.4	6.2	5.6	7.4	4.7	6.1	6.4	6.9	4.5	7.4
18.8	19.1	16.4	16.8	18.3	18.2	18.1	18.0	17.4	17.9	17.3	17.3
21.3	20.2	20.5	19.9	17.9	18.2	18.5	18.7	20.9	20.5	16.4	16.8
21.6	21.9	20.8	20.7	19.7	19.5	17.5	17.7	20.3	21.7	16.8	16.8
15.3	15.2	16.9	15.9	14.6	14.8	15.9	16.4	15.4	15.3	15.5	15.8
12.8	18.1	11.3	11.5	16.3	15.5	13.3	17.2	13.2	19.1	13.0	13.9
81.1	81.1	59.5	59.0	64.4	66.6	85.0	86.8	84.3	89.5	78.8	78.8
54.3	54.1	50.3	50.1	45.7	45.1	51.0	51.4	53.8	53.3	47.5	47.3
30.2	29.1	25.8	26.1	28.1	28.3	31.3	30.7	33.7	31.3	29.6	29.0
22.8	21.0	23.2	25.2	18.5	21.9	25.4	26.8	25.1	25.6	25.4	26.4
41.0	45.8	40.3	40.6	39.2	38.5	34.3	32.3	40.0	40.0	51.7	52.5
59.9	51.3	49.2	44.4	49.2	48.1	49.9	49.2	35.0	36.7	57.5	56.3

* 15-16 ounce can.

* Baked weight.

* 8-ounce package.

* 28-ounce package.

* No. 2. can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Little Rock, Ark.		Louisville, Ky.		Manchester, N. H.		Memphis, Tenn.	
		Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb...	34.7	34.4	33.1	32.7	54.5	54.8	36.3	35.1
Round steak.....	Lb...	32.5	32.1	30.4	31.2	47.8	48.2	33.6	32.8
Rib roast.....	Lb...	27.9	27.9	26.2	26.0	30.3	31.0	28.2	28.3
Chuck roast.....	Lb...	23.7	23.2	22.3	22.9	26.6	26.9	22.8	22.5
Plate beef.....	Lb...	17.7	17.1	18.5	19.3			18.2	17.9
Pork chops.....	Lb...	41.3	39.5	37.6	31.6	44.3	36.3	40.7	36.1
Bacon.....	Lb...	53.0	54.7	52.0	47.9	47.8	46.6	53.6	53.6
Ham.....	Lb...	55.0	51.3	48.8	49.3	48.9	47.2	54.6	52.5
Lamb.....	Lb...	35.6	33.8	29.2	29.0	36.1	34.6	38.0	36.7
Hens.....	Lb...	35.5	33.9	37.9	36.8	45.9		36.6	36.9
Salmon (canned).....	Lb...	33.6	34.0	32.3	32.8	36.2	37.4	35.7	36.2
Milk, fresh.....	Qt...	20.0	20.0	15.0	16.0	15.0	15.0	19.0	19.0
Milk, evaporated (unsweet- ened).....	(²)	18.2	18.3	17.2	16.9	18.1	18.1	17.3	17.6
Butter.....	Lb...	73.8	77.4	77.5	77.8	76.4	79.9	76.9	79.5
Oleomargarine.....	Lb...	44.1	44.0	43.8	44.3	43.4	43.5	43.1	42.2
Nut margarine.....	Lb...	37.8	38.5	33.5	34.7	34.8	34.3	39.7	40.3
Cheese.....	Lb...	42.5	43.4	41.8	42.4	42.9	42.9	42.1	43.5
Lard.....	Lb...	39.8	37.2	34.8	31.2	37.8	36.1	36.6	34.2
Crisco.....	Lb...	39.8	39.1	35.2	35.0	38.1	37.2	36.8	36.9
Eggs, strictly fresh.....	Doz...	68.6	81.0	74.7	81.9	104.5	108.2	68.7	86.2
Eggs, storage.....	Doz...	61.4	66.4	59.3	60.3	63.8	64.8	56.3	66.2
Bread.....	Lb. ³	10.0	10.0	10.0	10.0	9.5	9.5	10.0	10.0
Flour.....	Lb...	7.4	7.5	7.3	7.5	7.9	8.2	7.4	7.6
Corn meal.....	Lb...	5.6	5.9	5.2	5.2	7.4	7.3	5.3	5.2
Rollod oats.....	Lb...	11.1	11.0	9.8	9.8	9.7	9.6	11.0	11.1
Cornflakes.....	(⁴)	14.6	14.7	14.0	14.0	14.9	14.9	14.2	14.3
Cream of Wheat.....	(⁵)	25.4	26.9	25.9	26.5	25.0	26.8	24.3	27.1
Macaroni.....	Lb...	19.1	19.0	17.8	17.3	24.0	24.3	18.7	19.3
Rice.....	Lb...	17.9	16.9	18.5	18.1	17.1	17.7	16.5	17.1
Beans, navy.....	Lb...	13.1	12.6	12.1	11.9	12.5	12.1	13.9	13.0
Potatoes.....	Lb...	4.5	4.3	3.7	3.8	3.4	3.5	4.5	4.9
Onions.....	Lb...	8.0	8.9	5.8	7.3	6.3	9.1	7.9	8.3
Cabbage.....	Lb...	5.7	7.7	4.6	6.3	3.7	5.1	5.1	6.2
Beans, baked.....	(⁶)	16.6	16.9	15.8	15.9	18.4	17.9	18.0	18.4
Corn, canned.....	(⁶)	17.9	18.1	18.0	17.9	21.8	20.9	18.3	18.6
Peas, canned.....	(⁶)	18.4	18.9	17.9	17.7	21.3	20.8	18.5	18.6
Tomatoes, canned.....	(⁶)	14.9	14.8	15.3	15.3	18.3	17.0	16.2	15.8
Sugar, granulated.....	Lb...	17.6	22.4	11.7	18.1	11.2	11.5	21.5	21.8
Tea.....	Lb...	87.4	85.8	79.9	79.8	61.9	62.1	89.9	87.7
Coffee.....	Lb...	51.7	51.4	49.3	48.7	51.9	51.5	52.3	53.3
Prunes.....	Lb...	27.5	27.7	29.8	29.1	28.5	29.8	35.8	33.9
Raisins.....	Lb...	23.4	26.5	23.1	23.7	24.4	25.3	24.2	24.4
Bananas.....	Doz...	36.3	38.6	36.7	37.1	38.8	40.0	40.6	41.4
Oranges.....	Doz...	52.9	50.9	45.0	42.7	56.6	55.8	49.0	44.0

¹ The steak for which prices are here quoted is known as porterhouse in most of the cities included in this report, but in this city it is called "sirloin steak."

PRICES AND COST OF LIVING.

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OF FOOD FOR 31 CITIES ON NOV. 15 AND DEC. 15, 1919—Continued.

Minneapolis, Minn.		Mobile, Ala.		Newark, N. J.		New Haven, Conn.		Norfolk, Va.		Omaha, Nebr.	
Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
31.9	32.2	32.7	33.6	44.6	44.0	52.7	52.2	44.9	43.5	34.8	36.1
28.4	28.1	32.3	32.7	45.2	44.6	46.9	46.3	40.0	39.2	31.6	32.0
25.9	26.5	29.5	30.0	35.8	35.6	36.9	37.3	34.8	35.9	25.8	26.2
20.4	20.8	23.4	23.6	26.3	27.4	30.6	30.5	25.9	27.3	21.0	21.9
13.8	14.2	19.3	19.5	18.5	18.0			18.3	17.9	15.0	15.3
36.8	35.0	46.8	45.0	44.7	38.6	43.6	36.7	42.3	39.2	38.6	35.1
54.5	53.8	58.8	57.5	46.1	46.0	53.7	53.8	50.6	46.8	54.7	53.9
51.0	50.0	52.3	52.0	50.0	50.0	55.2	55.4	50.0	42.5	55.0	54.6
27.5	28.2	33.6	34.3	35.4	36.5	37.1	38.3	37.4	35.8	31.9	31.8
28.8	32.0	41.4	42.1	41.6	40.7	45.6	43.7	44.8	43.9	32.9	33.6
41.9	44.2	34.5	33.8	37.8	38.0	37.1	38.1	34.7	34.0	37.5	38.2
13.0	13.0	22.0	24.0	17.3	18.0	16.0	16.0	21.0	21.0	15.2	16.4
17.8	18.0	18.0	17.7	15.7	15.7	16.6	16.8	16.2	16.6	17.6	17.8
71.9	75.0	76.9	78.5	79.1	82.6	70.4	72.5	76.4	78.0	75.8	79.1
41.4	41.9	44.5	44.9	42.5	42.8	43.1	43.8	45.8	49.0	44.2	44.4
33.1	33.1	40.9	40.4	35.5	35.5	36.2	36.1	39.0	39.3	35.8	35.9
41.4	41.9	43.7	44.3	43.9	44.3	42.8	42.7	41.7	42.4	43.6	44.4
35.5	33.9	38.9	36.5	37.2	35.3	36.4	34.4	39.2	37.1	37.6	36.8
38.0	38.6	38.9	38.2	36.2	36.1	35.6	36.0	37.8	38.2	39.7	39.0
71.8	96.3	75.0	84.3	86.6	98.4	96.5	108.6	75.7	85.2	73.2	86.7
58.5	61.9	64.5	65.1	64.3	65.9	63.3	64.4	61.8	64.5	59.5	65.4
9.6	9.8	9.6	9.6	9.8	9.8	10.6	10.6	9.9	10.0	10.0	10.0
7.4	8.1	7.1	7.3	7.5	7.9	7.5	8.1	7.6	7.8	7.0	7.3
6.4	6.5	6.0	6.1	7.3	7.6	7.8	7.8	5.9	5.7	6.7	6.7
7.7	7.3	11.2	11.2	8.9	9.2	9.6	9.4	10.1	10.4	9.2	9.0
14.6	14.6	14.7	14.7	12.3	12.3	14.2	14.1	14.4	14.5	15.0	15.0
25.4	29.8	25.2	26.8	24.1	26.0	24.5	27.6	25.8	27.6	25.9	28.8
17.3	18.7	19.2	18.9	21.8	21.9	20.7	21.0	19.3	20.0	21.6	20.7
18.8	19.0	16.2	16.5	17.2	17.1	17.4	18.0	19.0	19.1	18.6	18.2
11.6	12.0	14.2	14.0	12.3	12.1	12.1	12.3	14.0	13.2	13.2	13.3
3.4	3.7	4.8	5.0	4.3	4.5	3.5	3.8	4.0	4.2	4.3	4.4
6.7	7.9	7.3	8.4	7.3	9.2	7.2	8.9	7.8	8.7	7.8	9.0
3.8	5.6	5.6	5.7	4.4	6.0	3.7	6.6	4.6	5.5	4.4	7.1
18.4	18.3	18.2	17.8	14.9	14.7	17.6	17.9	14.1	14.2	20.0	21.1
17.5	17.7	19.8	19.8	20.6	20.4	21.7	21.6	20.8	20.6	18.3	18.3
16.9	17.8	19.6	18.9	19.8	19.8	22.1	21.9	21.2	21.6	18.9	19.3
16.4	16.7	15.7	15.2	15.8	15.3	16.1	16.1	18.0	17.5	17.5	17.4
13.4	14.0	23.0	21.3	11.0	11.2	11.6	12.1	11.5	12.9	13.1	18.2
62.6	64.1	78.4	74.1	56.6	56.4	62.9	63.5	84.0	83.1	76.9	78.6
53.0	54.2	46.2	46.2	46.1	45.9	50.5	51.4	52.1	52.0	52.4	53.6
29.4	31.2	27.8	28.1	28.2	26.3	28.9	29.6	31.3	30.7	29.9	30.4
19.4	21.8	25.2	25.4	21.6	22.2	24.1	24.9	21.8	23.5	25.8	26.4
44.3	47.5	30.0	30.6	40.4	41.0	37.9	37.5	39.5	40.0	46.3	47.5
57.8	56.6	41.7	42.9	65.0	54.2	61.3	58.7	50.0	50.2	58.9	55.0

¹ 15-16-ounce can.

² Baked weight.

⁴ 8-ounce package.

⁶ 28-ounce package.

⁶ No. 2 can.

TABLE 5.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Peoria, Ill.		Portland, Me.		Portland, Oreg.		Providence, R. I.	
		Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	32.5	33.3	¹ 55.3	¹ 56.3	30.6	31.2	¹ 65.3	66.7
Round steak.....	Lb.	30.3	30.7	46.8	45.7	29.1	29.8	53.6	54.3
Rib roast.....	Lb.	24.3	23.7	31.1	30.4	27.9	27.8	42.0	42.6
Chuck roast.....	Lb.	21.2	21.5	24.4	23.7	21.1	22.2	34.8	34.9
Plate beef.....	Lb.	15.3	15.4			15.9	16.5		
Pork chops.....	Lb.	34.9	33.9	47.6	40.4	41.5	42.1	48.7	39.8
Bacon.....	Lb.	51.2	50.2	48.8	48.2	55.6	55.6	48.1	49.3
Ham.....	Lb.	52.3	53.3	51.9	51.6	52.9	53.8	61.1	60.6
Lamb.....	Lb.	31.3	31.3	33.5	34.8	30.7	31.9	41.1	40.5
Hens.....	Lb.	32.5	32.4	45.4	44.4	37.5	41.1	47.2	47.4
Salmon (canned).....	Lb.	33.3	35.3	34.9	38.4	40.8	40.8	40.0	41.0
Milk, fresh.....	Qt.	14.3	14.3	15.0	15.0	15.9	15.9	17.0	17.0
Milk, evaporated (unsweet- ened).....	(?)	17.7	17.8	17.4	17.5	17.2	17.4	17.4	17.6
Butter.....	Lb.	72.9	76.3	76.9	78.4	74.1	76.1	72.3	76.6
Oleomargarine.....	Lb.	44.5	44.7	44.6	44.4	43.0	42.2	40.5	40.8
Nut margarine.....	Lb.	35.5	35.6	35.9	35.6	38.6	38.7	35.0	35.2
Cheese.....	Lb.	43.7	44.3	44.8	44.7	43.8	44.1	42.8	42.9
Lard.....	Lb.	36.1	34.6	37.1	35.1	40.7	40.0	36.6	34.6
Crisco.....	Lb.	38.7	38.3	38.0	38.0	42.1	42.7	37.4	37.2
Eggs, strictly fresh.....	Doz.	74.4	84.2	98.3	105.0	87.9	87.1	104.7	107.8
Eggs, storage.....	Doz.	60.8	62.7	67.4	67.9	69.5	67.5	62.8	64.8
Bread.....	Lb. ³	10.0	10.0	11.0	11.0	10.6	10.6	10.6	10.7
Flour.....	Lb.	8.0	8.3	7.6	8.0	6.8	6.8	8.0	8.8
Corn meal.....	Lb.	6.3	6.2	6.9	6.8	7.6	7.7	6.4	6.5
Rolled oats.....	Lb.	9.1	9.4	8.3	7.9	9.1	9.1	9.3	9.8
Corn flakes.....	(⁴)	14.7	14.7	14.3	14.2	14.6	14.6	13.9	14.1
Cream of Wheat.....	(⁵)	26.0	29.4	25.2	28.0	28.2	31.3	24.7	27.3
Macaroni.....	Lb.	19.1	20.1	23.0	22.9	18.7	18.7	22.0	22.2
Rice.....	Lb.	17.9	18.2	16.6	16.7	18.8	17.9	17.4	17.8
Beans, navy.....	Lb.	12.2	12.1	12.1	12.1	11.8	11.0	11.7	11.7
Potatoes.....	Lb.	3.6	4.0	3.4	3.8	3.3	4.0	3.7	4.0
Onions.....	Lb.	7.5	7.7	6.3	8.8	5.6	6.4	6.6	8.8
Cabbage.....	Lb.	4.4	6.4	2.7	4.8	3.4	5.6	4.1	6.0
Beans, baked.....	(⁶)	18.0	18.1	20.0	19.3	21.8	22.0	16.4	16.8
Corn, canned.....	(⁶)	17.4	17.4	19.8	19.6	22.5	22.3	20.0	20.5
Peas, canned.....	(⁶)	18.5	18.3	20.6	21.1	22.5	22.9	19.8	20.4
Tomatoes, canned.....	(⁶)	15.9	15.5	19.0	19.0	18.4	18.9	17.3	17.8
Sugar, granulated.....	Lb.	13.1	14.0	11.0	11.3	11.8	12.5	11.1	11.6
Tea.....	Lb.	73.7	73.0	63.6	62.6	63.2	63.1	60.2	60.5
Coffee.....	Lb.	46.9	47.2	51.0	50.7	50.4	50.0	52.1	52.7
Prunes.....	Lb.	31.7	31.0	28.1	28.2	25.2	26.2	29.0	28.6
Raisins.....	Lb.	22.4	24.9	24.3	25.0	20.9	21.8	22.8	23.2
Bananas.....	Doz.	11.0	10.9	38.3	37.5	45.0	45.0	42.0	41.7
Oranges.....	Doz.	53.7	52.7	64.7	61.3	64.6	59.2	64.3	61.3

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin steak."

OF FOOD FOR 31 CITIES ON NOV. 15, AND DEC. 15, 1919—Concluded.

Richmond, Va.		Rochester, N. Y.		St. Paul, Minn.		Salt Lake City, Utah.		Scranton, Pa.		Springfield, Ill.	
Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.	Nov. 15, 1919.	Dec. 15, 1919.
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>
42.3	41.0	38.0	38.1	31.3	32.8	30.9	31.5	43.2	42.5	31.5	32.1
38.5	37.6	35.0	34.4	27.5	28.8	28.8	28.4	37.5	36.8	31.4	32.0
32.7	34.5	30.6	30.5	27.3	28.8	25.3	24.8	34.4	33.7	22.7	22.9
27.9	27.3	27.2	27.3	21.9	22.9	20.8	20.3	27.5	27.4	19.9	20.1
22.3	22.5	18.8	18.4	13.7	15.0	15.1	15.4	17.4	17.4	15.5	16.0
43.1	39.5	41.4	38.9	35.4	34.0	41.3	40.4	45.1	42.6	37.6	35.5
48.9	46.6	42.4	42.0	47.4	46.8	53.7	52.3	53.7	53.6	45.7	45.4
49.0	46.7	49.1	48.5	48.8	48.1	53.0	53.3	50.0	47.5	48.8	48.9
39.4	39.3	30.1	30.2	26.2	27.4	27.4	26.8	39.9	40.7	33.3	31.9
41.3	39.7	41.1	40.8	28.9	31.2	35.6	33.1	45.5	45.5	33.0	31.5
27.4	27.5	35.8	37.1	36.9	37.7	35.0	37.1	39.2	38.8	35.6	35.8
16.7	16.7	14.5	14.8	13.0	13.0	12.5	12.5	15.0	15.0	16.7	16.7
17.1	17.3	17.3	17.3	17.4	17.6	16.9	16.0	16.1	16.4	18.3	18.6
79.8	82.6	72.9	75.5	72.9	74.1	74.4	76.8	69.6	73.2	77.8	78.9
43.8	43.3	44.6	44.4	41.1	41.2	42.9	42.0	44.4	45.3	45.4	44.9
37.3	38.1	34.6	34.8	34.6	34.6	39.3	38.5	37.6	36.1	36.0	36.3
43.4	43.7	42.0	42.0	41.9	42.6	42.7	42.7	41.1	41.4	44.6	44.8
37.4	35.7	36.4	34.8	35.4	34.5	39.8	39.6	37.5	36.5	36.3	35.9
38.7	38.5	36.7	36.4	41.2	39.7	43.2	44.5	37.9	38.4	40.2	40.6
76.9	83.1	94.4	102.5	73.8	94.5	82.7	83.8	88.6	108.3	72.8	82.0
64.5	66.3	61.2	62.7	60.5	62.3	65.2	67.0	63.1	63.5	61.1	65.2
11.1	10.9	10.0	10.0	9.4	9.2	10.1	10.3	10.0	10.0	10.0	10.0
7.7	8.1	7.5	8.0	7.5	8.2	6.2	6.5	7.9	8.3	7.6	8.1
6.1	6.2	7.0	7.3	6.5	6.6	7.4	7.4	8.7	9.1	6.6	6.4
10.8	10.5	7.4	7.5	7.8	7.8	9.2	9.1	10.4	10.5	10.5	9.9
14.7	14.5	13.8	13.9	14.4	14.5	14.7	14.8	14.2	14.2	14.9	15.0
25.7	27.8	24.8	27.8	25.6	30.2	26.5	29.7	25.4	26.4	27.5	28.5
18.7	18.6	20.8	20.8	19.2	19.2	19.0	19.5	21.8	22.2	18.9	19.5
19.1	18.9	18.0	18.4	19.0	18.8	17.8	17.3	18.0	18.6	18.8	19.3
14.0	13.3	12.1	12.1	12.0	11.8	12.9	13.4	14.8	14.5	12.7	12.8
4.8	4.8	2.9	3.8	3.2	3.5	3.3	4.0	3.4	3.9	4.1	4.4
6.9	8.6	6.4	7.6	6.7	7.8	6.1	7.0	6.3	7.7	6.9	7.9
5.1	6.6	3.4	4.7	3.5	5.1	5.4	6.3	3.0	4.4	4.4	6.0
14.9	14.3	15.2	14.8	19.3	19.3	19.3	20.0	16.3	16.1	17.9	19.2
19.4	19.4	19.8	19.6	18.0	17.7	18.1	17.8	20.0	19.4	16.9	17.0
22.4	22.0	19.7	19.7	17.1	17.4	18.0	18.2	19.1	18.8	18.0	18.7
18.3	18.8	16.3	16.3	16.0	16.0	17.0	16.9	17.5	17.9	16.7	16.7
11.3	11.9	11.0	11.9	13.8	14.4	12.3	12.8	11.6	12.4	13.9	14.7
83.3	84.3	63.3	64.7	63.4	65.0	79.9	79.2	67.2	67.5	85.3	84.2
47.4	46.6	46.4	46.3	50.8	51.0	58.6	57.8	50.0	49.5	50.6	51.2
33.3	29.5	28.7	28.7	29.1	30.4	18.8	27.9	27.9	28.5	31.7	33.1
21.9	23.6	21.8	23.4	22.9	24.4	23.1	24.8	22.0	24.6	25.0	25.0
45.4	45.5	41.1	41.6	55.0	56.7	51.0	47.0	34.6	34.6	38.3	50.0
50.9	43.8	57.2	49.8	58.4	58.1	56.4	53.8	58.6	55.9	52.2	51.9

2 15-16 ounce can.

3 Baked weight.

4 8-ounce package.

5 28-ounce package.

6 No. 2 can.

Comparison of Retail Food Costs in 50 Cities.

THE table following shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles,¹ combined, in December, 1919, as compared with the average cost in the year 1913, in December, 1918, and in November, 1919. For 11 other cities, comparisons are given for the one-year and the one-month periods. These cities have been scheduled by the Bureau at different dates since 1913.

The average family expenditure is based on the prices sent to the Bureau each month by retail dealers, and on the average family consumption of these articles in each city.

The amounts given as the expenditures in December, 1918, and in November and December, 1919, represent the amounts necessary to buy a year's supply of these 22 food articles when purchased at the average retail prices charged in the months specified. This method makes it easier to ascertain the increase over the year 1913. The year 1913 has been selected for the comparison because it was the last year before the war, when prices were normal.

No attempt should be made in this table to compare one city with another, as the average number of persons in the family varies from city to city, and these 22 food articles represent a varying proportion of the entire food budgets according to locality. This table is intended merely to show comparisons in the retail cost of these 22 food articles for each city.

As may be seen in Table 6, the average family expenditure for 22 articles of food¹ increased in December in all but 4 of the 50 cities. In Fall River, Boston, Norfolk, and Richmond, the decrease was less than five-tenths of 1 per cent. In Baltimore, Manchester, and Portland, Me., the increase was less than five-tenths of 1 per cent. In 8 cities, the expenditure increased 1 per cent each; in 18 cities, 2 per cent each; and in 12 cities, 3 per cent each. In Atlanta and Scranton, the increase was 4 per cent, and in Minneapolis, Omaha, and St. Paul, 5 per cent. During the year period from December, 1918, to December, 1919, the three cities showing the greatest increases were Minneapolis, 14 per cent; Omaha, 12 per cent; and Mobile, 10 per cent. Baltimore decreased 2 per cent and was the only city which showed a decrease as compared with December, 1918. As compared with the average expenditure in the year 1913, the following cities showed an increase of 100 per cent and over: Richmond and Providence, 100 per cent each; Buffalo, 101 per cent; Atlanta, 102 per cent; Milwaukee and Washington, 103 per cent each; St. Louis, 104

¹ See first paragraph of note 1, page 57; lamb is not included.

per cent; Charleston, Memphis, and Minneapolis, 105 per cent each; Detroit, 106 per cent; Omaha, 108 per cent; and Birmingham, 109 per cent.

TABLE G.—RETAIL COST OF 22 FOOD ARTICLES,¹ COMBINED, IN DECEMBER, 1919, COMPARED WITH THE COST IN NOVEMBER, 1919, DECEMBER, 1918, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

City.	Average family expenditure for 22 food articles, combined.				Percentage increase, December, 1919, compared with—		
	1913	December, 1918. ²	1919		1913	December, 1918.	November, 1919.
			November. ³	December. ³			
Atlanta.....	\$361.00	\$678.48	\$701.06	\$729.36	102	8	4
Baltimore.....	335.15	681.51	666.96	668.08	99	82	
Birmingham.....	373.53	732.74	771.53	787.24	109	7	(⁴) 2
Boston.....	388.16	709.74	735.42	733.87	89	3	(⁵)
Bridgeport.....		686.38	695.16	708.17		3	2
Buffalo.....	348.15	617.38	620.04	640.30	101	4	3
Butte.....		480.47	478.96	483.92		3	3
Charleston.....	348.60	631.40	699.39	713.67	105	5	2
Chicago.....	336.48	617.03	653.52	686.53	98	8	2
Cincinnati.....	338.26	615.94	645.31	654.65	94	7	2
Cleveland.....	354.01	650.55	686.52	699.83	98	8	2
Columbus.....		638.05	658.04	667.29		5	1
Dallas.....	395.41	723.10	750.20	759.67	92	5	1
Denver.....	247.36	451.92	463.47	474.26	92	5	2
Detroit.....	335.02	630.21	672.87	689.00	106	9	2
Fall River.....	375.51	695.79	713.78	712.46	90	2	(⁵)
Houston.....		696.30	721.18	736.63		6	2
Indianapolis.....	345.23	623.35	657.07	678.18	96	9	3
Jacksonville.....	377.10	690.34	694.52	710.26	89	3	2
Kansas City.....	340.12	637.01	658.29	676.17	99	0	3
Little Rock.....	390.14	705.71	735.88	754.15	93	7	2
Los Angeles.....	284.84	470.83	488.77	497.61	75	6	3
Louisville.....	363.85	685.77	687.24	696.32	91	2	1
Manchester.....	366.01	686.22	704.27	704.95	93	3	(⁴)
Memphis.....	308.46	706.74	744.04	754.17	105	7	1
Milwaukee.....	327.25	617.76	644.83	662.68	103	7	3
Minneapolis.....	319.98	577.06	624.79	657.06	105	14	5
Mobile.....		710.01	773.06	779.99		10	1
Newark.....	364.92	680.75	673.07	685.60	88	1	2
New Haven.....	376.96	704.34	708.93	718.31	91	2	1
New Orleans.....	369.29	692.71	700.14	719.88	95	4	3
New York.....	355.36	677.42	692.03	708.30	99	5	2
Norfolk.....		677.99	700.49	697.27		3	(⁵)
Omaha.....	334.52	622.35	662.54	696.01	108	12	5
Peoria.....		603.35	636.07	654.83		9	3
Philadelphia.....	352.19	665.10	676.56	691.08	96	4	2
Pittsburgh.....	350.35	656.58	680.75	691.77	97	5	2
Portland, Me.....		687.01	704.38	705.65		3	(⁴)
Portland, Oreg.....	266.03	453.67	475.50	487.67	83	6	3
Providence.....	380.85	722.07	753.62	761.77	100	6	1
Richmond.....	346.40	680.34	694.63	692.89	100	2	(⁵)
Rochester.....		629.30	636.62	655.54		4	3
St. Louis.....	326.36	623.82	649.99	666.96	104	7	3
St. Paul.....		598.99	619.85	650.89		9	5
Salt Lake City.....	261.87	449.34	459.06	466.37	78	4	2
San Francisco.....	271.48	471.10	479.50	493.51	82	5	3
Scranton.....	335.98	656.95	663.21	687.15	99	5	4
Seattle.....	265.35	476.97	490.69	500.15	88	8	2
Springfield.....		621.31	658.06	671.43		8	2
Washington.....	354.82	702.31	711.22	721.54	103	3	1

¹ See first paragraph of note 1, page 57; lamb is not included.

² Cost of year's supply at prices charged in specified months.

³ Decrease.

⁴ Increase of less than five-tenths of 1 per cent.

⁵ Decrease of less than five-tenths of 1 per cent.

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase in the cost of food and general family expenditure by years, January, 1915 to 1919, and by months, January, 1919, to January, 1920, inclusive, over July, 1914. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or frozen; bacon, fish, flour, bread, tea, sugar, milk; butter, fresh and salt; cheese, margarine, eggs, and potatoes.

The table gives percentages of increase, and is not one of relative prices, as is the table given for the United States. When making comparisons this should be borne in mind, and to obtain the relative price it is necessary to add 100 to the percentage as given, i. e., January, 1919, the increase is 130, the relative price being 230.

The figures represent two comparisons: First, the increase in price based on the same quantities as used in July, 1914; second, the increase in the cost of living, based on the change in the quality of the standard of living. In other words, the increase in column one of the table shows what the wage earner paid for the same quantities of food, while the figures in column two give the change that results from a substitution of one kind of food for another to meet wartime conditions.

The same method is used in family expenditures, the third column showing percentage of increase of all articles and the last column giving approximate figures, based on the increase in cost of all articles and the estimated changes in consumption of food.

INCREASE IN FOOD AND ALL ITEMS IN GREAT BRITAIN, BASED ON JULY, 1914.

[Compiled from the British Labour Gazette.]

Year and month.	Per cent of increase as compared with July, 1914.			
	Food.		All items in family budget.	
	Retail prices, assuming same quantities.	Expenditures, allowing for estimated changes in consumption.	Retail prices, assuming same quantities.	Expenditures, allowing for estimated changes in consumption.
January, 1915.	18			
January, 1916.	45			
January, 1917.	87	145	260	
January, 1918.	106	159	85-90	
January, 1919.	130	79	120	90
1919.				
January.	130	79	120	90
February.	130	77	120	90-95
March.	120	79	115	90
April.	113	87	110	95
May.	107	81	105	90
June.	104	87	105	95
July.	109	97	105-110	100
August.	117	108	115	110
September.	116	103	115	105
October.	122	113	120	110-115
November.	131	119	125	115-120
December.	134	116	125	110-115
1920.				
January.	136	115	125	115

¹ Approximate increase if standard of consumption is changed as follows: Eggs omitted, margarine substituted for butter; sugar and fish consumption cut one-half.

² Not including taxes.

³ Based on change in standard of food consumption adopted by the Ministry of Food.

⁴ The increase, excluding additional taxation, is 7 per cent less.

⁵ The increase, excluding additional taxation, is 6 per cent less.

Index Numbers of Wholesale Prices in the United States, 1913, to December, 1919.

A FURTHER large increase in wholesale prices in the United States is shown by the Bureau's weighted index number for December, which stands at 238 as compared with 230 for November and 223 for October, the average for the year 1913 being regarded as 100. Food products furnished one of the most notable instances of price increase from November to December, the index number rising from 219 to 234, or nearly 7 per cent. The group of lumber and building materials showed an even greater increase, its index number advancing from 236 to 253, or more than 7 per cent. In the remaining groups farm products increased from 240 to 244, cloths and clothing from 325 to 335, and metals and metal products from 164 to 169. Somewhat smaller increases were recorded for chemicals and drugs (176 to 179), and house-furnishing goods (299 to 303). The fuel and lighting group showed an increase of only 2 points, from 179 to 181, while in the group of miscellaneous commodities no change in the general price level took place.

The striking increase in the index number for the group of food products is due in large measure to the considerable increases that took place in December in the wholesale prices of eggs, wheat and rye flour, milk, potatoes, and particularly raw and granulated sugar. All of these commodities, owing to their importance, are quite heavily weighted in calculating the Bureau's index number. At New York the price of 96° centrifugal sugar averaged 41 per cent higher in December than in the preceding month. Granulated sugar was 23 per cent higher, eggs from 16 to 20 per cent higher, and potatoes 15 per cent higher in December than in November. In the group of lumber and building materials a number of important articles averaged from 12 to 14 per cent higher in price.

Among other important commodities showing increased prices are cotton, flaxseed, wheat, barley, oats, rye, hay, sheep, tobacco, butter, corn meal, hams, lamb and mutton, molasses, vinegar, cotton and woolen goods, silk, coke, crude and refined petroleum, pig iron, pig lead, silver, steel, pig tin, spelter, brick, lumber, plate glass, shingles, lead carbonate, linseed oil, ammonia, glycerine, quinine, wooden furniture, bran, and lubricating oil.

Some articles, as corn, cattle, hides, hogs, peanuts, cheese, coffee, fruits, bacon, lard, tallow, sole leather, copper, and cottonseed meal and oil were cheaper in December, while beef, beans, canned goods, fish, oleomargarine, salt, tea, wool, coal, matches, gasoline, iron ore, lime, cement, glass and earthen ware, jute, paper, rope, rubber, soap, and wood pulp showed practically no change in price.

In the following table the complete series of index numbers for each group of commodities and for all commodities combined is shown for each month of the 7-year period, 1913 to 1919, inclusive:¹

¹ This table is published quarterly, in the February, May, August, and November issues of the MONTHLY LABOR REVIEW. A somewhat abridged table of index numbers is published in other issues.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS OF COMMODITIES AND BY MONTHS, 1913 TO 1919.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building material.	Chemicals and drugs.	House furnishing goods.	Miscellaneous.	All commodities.
1913.										
Average for year...	100	100	100	100	100	100	100	100	100	100
January.....	97	99	100	103	107	100	101	100	100	100
February.....	97	98	101	103	105	101	101	100	100	100
March.....	99	97	100	102	102	101	101	100	99	99
April.....	97	96	100	98	102	101	101	100	98	98
May.....	98	95	100	98	102	101	100	100	98	98
June.....	99	99	99	100	100	101	100	100	100	100
July.....	101	102	100	99	98	101	99	100	101	100
August.....	101	104	100	100	99	99	99	100	102	101
September.....	104	105	100	100	99	99	99	100	102	102
October.....	103	102	100	100	99	98	100	100	100	101
November.....	101	105	100	99	96	98	100	100	100	101
December.....	101	101	99	99	92	98	100	100	100	99
1914.										
January.....	101	102	98	99	92	98	100	99	99	100
February.....	102	100	99	99	92	99	100	99	100	99
March.....	103	97	99	99	92	99	100	99	101	99
April.....	103	95	99	98	91	99	100	99	101	98
May.....	104	96	99	95	87	98	100	99	101	98
June.....	104	100	99	94	86	98	100	99	99	99
July.....	104	104	99	95	85	97	99	99	97	100
August.....	109	112	99	94	85	97	99	99	98	103
September.....	108	116	98	95	86	96	104	99	99	104
October.....	103	107	97	93	83	96	105	99	96	99
November.....	101	106	96	93	81	95	105	99	96	98
December.....	99	105	96	94	83	94	104	99	98	98
1915.										
January.....	102	106	96	93	83	94	103	99	100	99
February.....	105	108	97	92	87	95	102	99	100	101
March.....	105	104	97	92	89	94	102	99	99	99
April.....	107	105	99	89	91	94	102	99	99	100
May.....	109	105	99	89	96	94	102	99	98	101
June.....	105	102	99	89	100	93	104	99	97	99
July.....	108	104	99	90	102	93	108	99	98	101
August.....	107	102	99	92	100	92	112	99	97	100
September.....	103	100	100	94	100	92	116	99	97	99
October.....	105	103	103	96	100	93	124	99	99	101
November.....	102	107	105	98	104	94	142	99	100	103
December.....	103	111	107	100	114	97	153	99	103	106
1916.										
January.....	108	113	110	105	126	99	150	105	107	110
February.....	109	114	113	106	132	100	170	105	106	112
March.....	111	115	117	108	141	101	175	106	109	114
April.....	114	117	119	108	147	101	172	108	110	117
May.....	116	119	122	107	151	102	166	112	113	118
June.....	116	119	124	108	149	101	166	112	119	119
July.....	118	121	126	108	145	99	156	121	120	119
August.....	126	128	128	110	145	100	146	122	122	123
September.....	131	133	131	115	148	100	147	122	125	128
October.....	136	140	138	133	151	101	150	124	132	134
November.....	146	150	146	155	160	104	155	123	135	144
December.....	142	145	155	170	185	106	159	124	137	146
1917.										
January.....	148	150	161	176	183	106	159	132	138	151
February.....	151	159	162	185	190	108	160	132	141	156
March.....	163	160	164	188	199	110	165	132	143	161
April.....	181	182	169	184	208	114	170	139	149	172
May.....	197	190	173	194	217	117	179	139	150	182
June.....	197	187	179	201	239	127	180	144	152	185
July.....	199	181	187	192	257	132	198	152	153	186
August.....	205	180	193	165	249	133	209	152	156	185
September.....	204	178	193	160	226	134	223	152	155	183
October.....	208	183	193	146	182	134	252	152	163	181
November.....	212	184	198	155	174	131	240	155	166	183
December.....	205	185	202	158	174	135	238	155	170	182

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS OF COMMODITIES AND BY MONTHS, 1913 TO 1919.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building material.	Chemicals and drugs.	House furnishing goods.	Miscellaneous.	All commodities.
1918.										
January.....	207	187	211	137	174	136	232	161	178	185
February.....	208	186	216	157	176	138	232	161	181	186
March.....	212	177	223	158	176	144	232	165	184	187
April.....	217	178	232	137	177	146	229	172	191	190
May.....	214	177	237	160	178	148	223	173	194	190
June.....	217	179	215	139	178	150	219	198	196	193
July.....	221	181	249	166	184	154	216	199	190	198
August.....	230	191	252	166	185	157	222	221	191	202
September.....	237	199	255	167	184	159	220	226	194	207
October.....	224	201	257	167	187	158	218	226	196	204
November.....	221	206	256	171	188	164	215	226	203	206
December.....	222	210	250	171	184	164	195	227	204	206
1919.										
January.....	222	207	234	170	172	161	191	218	212	203
February.....	218	196	223	169	168	163	185	218	208	197
March.....	228	203	216	168	162	165	183	218	217	201
April.....	235	211	217	167	152	162	178	217	216	203
May.....	240	214	228	167	152	164	179	217	213	207
June.....	231	204	258	170	154	175	174	233	212	207
July.....	246	216	282	171	158	186	171	245	221	218
August.....	243	227	304	175	165	208	172	259	225	226
September.....	226	211	306	181	160	227	173	282	217	220
October.....	230	211	313	181	161	231	174	284	220	223
November.....	240	219	325	179	164	236	176	299	220	230
December 1.....	244	234	335	181	169	253	179	303	220	238

¹ Preliminary.

In order that a comparison of wholesale price trends over the entire period since 1890 may be obtained, the following table is presented. These yearly index numbers are constructed in the same manner as the monthly figures shown in the preceding table and are directly comparable therewith:

INDEX NUMBERS OF WHOLESALE PRICES, 1890 to 1918, BY GROUPS OF COMMODITIES.

[1913=100.]

Year.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House furnishing goods.	Miscellaneous.	All commodities.
1890.....	68	89	94	69	114	72	90	72	92	81
1891.....	73	89	91	68	102	70	92	72	92	82
1892.....	66	80	91	66	93	67	91	71	88	76
1893.....	67	87	88	66	85	68	90	68	91	77
1894.....	59	77	78	61	72	66	83	67	86	69
1895.....	60	74	78	67	77	64	88	62	82	70
1896.....	54	67	75	69	80	63	91	58	80	66
1897.....	58	71	75	62	71	62	89	56	80	67
1898.....	61	76	79	61	71	65	93	61	79	69
1899.....	62	75	82	71	108	71	96	62	82	74
1900.....	69	79	88	80	106	76	97	69	91	80
1901.....	73	80	82	78	98	73	98	69	90	79
1902.....	81	85	84	92	97	77	97	73	92	85
1903.....	75	82	88	105	96	80	96	74	94	85
1904.....	80	87	89	91	88	80	97	73	94	86
1905.....	77	86	91	87	98	85	96	71	95	85
1906.....	78	84	97	90	113	94	94	74	97	88
1907.....	85	89	104	93	120	97	96	80	101	94
1908.....	85	94	94	91	94	92	100	78	97	91
1909.....	97	99	98	88	92	97	101	77	109	97
1910.....	103	100	99	84	93	101	102	80	116	99
1911.....	93	99	96	82	89	101	103	85	104	95
1912.....	101	108	98	89	99	100	101	91	101	101
1913.....	100	100	100	100	100	100	100	100	100	100
1914.....	103	103	98	96	87	97	101	99	99	100
1915.....	105	104	100	93	97	94	114	99	99	101
1916.....	122	126	128	119	148	101	159	115	120	124
1917.....	189	176	181	175	208	124	198	144	155	176
1918.....	220	189	239	163	181	151	221	196	193	196
1919.....	234	210	261	173	161	192	179	236	217	212

Changes in Wholesale Prices in the United States.

INCREASES in the wholesale price of many important commodities in the United States during the last quarter of 1919 are shown by information collected in representative markets by the Bureau of Labor Statistics. Among the articles showing an increase are sheep, mutton, salt pork, butter, eggs, milk, wheat and wheat flour, corn and corn meal, oats, rye and rye flour, barley, rice, potatoes, sugar, cotton and cotton goods, wool and woolen goods, shoes, coke, iron and steel products, spelter, and crude petroleum.

On the other hand, some articles, as cattle, salt beef, hogs, lard, hides, sole leather, bituminous coal, copper and copper wire, and pig tin decreased in price during the quarter, while bacon, hams, anthracite coal, tin plate, refined petroleum, and gasoline showed practically no change in price.

Comparing prices in December with those in January, 1919, it is seen that butter, eggs, wheat and wheat flour, corn, oats, rye and rye flour, barley, rice, potatoes, sugar, cotton and cotton goods, wool, hides, leather, shoes, anthracite coal, coke, iron and steel products, pig lead, spelter, and crude and refined petroleum averaged higher in price. Cattle, beef, hogs, bacon, hams, sheep, mutton, milk, corn meal, electrolytic copper, copper wire, tin plate, and pig tin were lower in December than in January. Gasoline and bituminous coal showed practically no difference in price for these two months.

Average money prices.

Article.	Unit.	1913	July—			1918				1919						
		1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.	Nov.	Dec.	
FOODSTUFFS.																
(a) Animal.																
Cattle, good to choice steers.....	100 lbs.	\$8.507	\$9.219	\$9.213	\$9.985	\$12.560	\$13.113	\$15.175	\$17.025	\$17.856	\$18.413	\$18.325	\$16.869	\$17.504	\$12.500	\$17.075
Beef, fresh, good native steers.....	Lb.	.130	.135	.132	.141	.164	.175	.205	.240	.245	.245	.245	.208	.229	.235	.235
Beef, salt, extra mess.....	Bbl.	18.923	17.250	17.500	18.250	30.500	31.500	31.900	34.875	35.500	35.500	35.500	34.300	23.250	22.833	22.100
Hogs, heavy.....	100 lbs.	8.365	8.769	7.281	9.825	15.460	16.300	17.150	17.720	17.850	17.538	20.500	22.225	14.644	13.690	13.690
Bacon, short, clear sides.....	Lb.	.127	.141	.111	.157	.248	.293	.271	.276	.286	.289	.326	.337	.227	.232	.226
Hams, smoked, loose.....	Lb.	.166	.177	.161	.190	.240	.295	.308	.303	.336	.349	.360	.384	.290	.286	.289
Lard, prime, contract.....	Lb.	.110	.102	.081	.131	.201	.250	.258	.264	.266	.238	.313	.351	.280	.259	.240
Pork, salt, mess.....	Bbl.	22.471	23.625	18.500	27.167	42.250	50.400	53.200	48.500	42.500	50.375	55.000	58.000	44.125	46.667	47.050
Sheep, ewes.....	100 lbs.	4.687	4.538	5.469	6.545	8.600	11.144	14.950	10.975	9.469	9.550	13.500	8.125	7.488	8.940	8.940
Mutton, dressed.....	Lb.	.103	.098	.109	.131	.145	.192	.243	.205	.151	.176	.229	.159	.126	.130	.140
Butter, creamery, extra.....	Lb.	.310	.270	.261	.276	.376	.487	.415	.432	.554	.618	.615	.512	.646	.686	.681
Eggs, fresh, firsts.....	Doz.	.226	.187	.169	.223	.318	.557	.330	.374	.497	.579	.403	.400	.569	.633	.733
Milk.....	Qt.	.035	.030	.030	.031	.050	.081	.059	.054	.082	.091	.066	.071	.073	.078	.083
(b) Vegetable.																
Wheat, No. 1, northern.....	Bu.	.874	.897	1.390	1.170	2.482	2.170	2.170	2.170	2.216	2.223	2.589	2.680	2.625	2.825	3.030
Wheat flour, standard patent.....	Bbl.	4.584	4.594	7.031	6.100	12.750	10.085	9.985	10.702	10.210	12.275	12.155	12.155	12.031	12.950	14.025
Corn, No. 2, mixed.....	Bu.	.625	.710	.783	.808	2.044	1.775	1.665	1.665	1.385	1.401	1.609	1.920	1.400	1.408	1.480
Corn meal.....	100 lbs.	1.599	1.780	1.750	1.982	4.880	4.835	5.350	4.825	3.370	3.150	3.525	4.488	2.950	3.060	3.088
Oats, standard, in store.....	Bu.	.376	.369	.529	.405	2.764	2.799	.872	.765	.693	.653	.681	.754	.700	.738	.818
Rye, No. 2.....	Bu.	.536	.618	1.036	.966	2.226	1.915	2.648	1.705	1.625	1.613	1.731	1.555	1.388	1.406	1.684
Rye flour.....	Bbl.	3.468	3.075	5.533	5.035	11.417	10.356	13.087	10.500	9.169	8.738	10.060	8.050	7.413	7.404	7.820
Barley, fair to good malting.....	Bu.	.625	.533	.743	.746	1.391	1.534	1.722	1.125	.957	.950	1.133	1.268	1.299	1.404	1.543
Rice, Honduras, head.....	Lb.	.051	.054	.049	.045	.070	.079	.087	.084	.091	.091	.087	.133	.121	.127	.124
Potatoes, white.....	Bu.	.614	1.206	.444	.863	.275	.887	.657	1.035	.993	1.081	1.152	1.683	1.350	1.665	1.917
Sugar, granulated.....	Lb.	.043	.042	.058	.073	.075	.074	.073	.073	.088	.088	.088	.088	.088	.088	.109

¹ This table is published quarterly in the February, May, August, and November issues of the MONTHLY LABOR REVIEW.
² Standard war flour.

WHOLESALE PRICES IN JULY, 1914, 1915, 1916, AND 1917, AND IN CERTAIN MONTHS OF 1918 AND 1919, AS COMPARED WITH AVERAGE PRICES
IN 1913—Continued.

Average money prices—Continued.

Article.	Unit.	July—					1918				1919					
		1913	1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.	Nov.	Dec.
TEXTILES AND LEATHER GOODS.																
Cotton, upland, middling.....	Lb.....	\$0.128	\$0.131	\$0.092	\$0.130	\$0.261	\$0.324	\$0.317	\$0.312	\$0.325	\$0.296	\$0.290	\$0.351	\$0.355	\$0.305	\$0.394
Cotton yarn, carded, 10/1.....	Lb.....	.221	.215	.160	.253	.450	.536	.616	.641	.610	.445	.417	.591	.611	.495	.699
Sheeting, brown, Pepperell.....	Yd.....	.073	.070	.060	.078	.140	.171	.240	()	()	.191	.150	.219	.229	()	()
Bleached muslin, Lonsdale.....	Yd.....	.082	.085	.075	.088	.160	.180	.230	.250	.250	.409	.176	.274	.294	.284	.294
Wool, 1/4 and 3/8 grades, scoured.....	Lb.....	.471	.444	.537	.686	1.200	1.455	1.455	1.437	1.437	1.109	1.001	1.236	1.236	1.255	1.255
Worsted yarn, 2/32's.....	Lb.....	.777	.650	.850	1.100	1.600	2.000	2.150	2.150	2.150	1.750	1.500	1.600	1.750	()	()
Clay worsted suitings, 16-oz.....	Yd.....	1.382	1.238	1.508	2.000	3.250	4.065	4.275	4.450	()	()	()	()	()	()	()
Storm serge, all-wool, 50-in.....	Yd.....	.563	.505	.539	.760	1.176	1.308	1.378	1.470	1.642	1.642	1.054	1.223	1.374	1.421	1.421
Hides, packers' heavy native steers.....	Lb.....	.184	.194	.238	.270	.330	.358	.272	.324	.300	.280	.285	.486	.482	.469	.440
Leather, chrome calf.....	Sq. ft.....	.270	.275	.280	.400	.540	.530	.550	.640	.630	.660	.680	1.100	1.250	1.275	1.275
Leather, sole, oak.....	Lb.....	.449	.475	.495	.635	.815	.830	.800	.830	.770	.785	.825	.950	1.025	1.025	.915
Shoes, men's, Goodyear welt, vici calf, blucher.....	Pair.....	3.113	3.150	3.250	3.750	4.750	4.750	5.000	5.645	6.500	6.500	6.500	7.476	9.000	9.058	9.250
Shoes, women's, Goodyear welt, gun metal, button.....	Pair.....	2.175	2.260	2.350	2.750	3.500	3.500	3.500	4.500	4.850	4.850	4.850	6.250	6.850	6.850	6.850
MINERAL AND METAL PRODUCTS.																
Coal, anthracite, chestnut.....	2,240 lbs.....	5.313	5.241	5.200	5.507	5.933	6.600	6.370	6.603	7.000	5.050	8.017	8.304	8.507	8.527	8.521
Coal, bituminous, run of mine.....	2,000 lbs.....	2.200	2.200	2.200	2.500	3.000	3.600	3.600	4.100	4.100	4.100	4.000	4.000	4.500	4.100	4.100
Coke, furnace, prompt shipment.....	2,000 lbs.....	2.538	2.000	2.750	2.750	15.000	6.000	6.000	6.000	6.000	5.781	3.000	4.005	4.825	5.928	6.050
Copper, electrolytic.....	Lb.....	.157	.134	.199	.265	.318	.235	.235	.285	.300	.204	.153	.215	.217	.204	.187
Copper wire, bare, No. 8.....	Lb.....	.167	.148	.210	.325	.328	.262	.263	.285	.290	.258	.175	.244	.264	.248	.219
Pig iron: Bessemer.....	2,240 lbs.....	17.133	14.900	14.950	21.950	57.450	37.250	36.150	36.600	36.600	33.600	29.350	30.350	31.263	31.263	37.000
Steel billets.....	2,240 lbs.....	25.789	19.000	21.350	41.000	100.000	47.500	47.500	47.500	47.500	43.500	38.500	38.500	41.375	46.400	46.400
Tin plate, domestic, coke.....	100 lbs.....	3.558	3.350	3.175	5.875	12.000	7.750	7.750	7.750	7.750	7.350	7.000	7.000	7.000	7.000	7.000
Pig tin.....	Lb.....	.044	.031	.391	.380	.620	.842	.880	.932	.796	.715	.725	.702	.560	.544	.553
Pig lead.....	Lb.....	.049	.039	.068	.069	.114	.068	.070	.080	.081	.056	.051	.056	.064	.068	.072
Spelter.....	Lb.....	.058	.051	.220	.113	.063	.079	.070	.087	.091	.074	.065	.079	.079	.081	.087
Petroleum, refined.....	Bbl.....	2.450	1.750	1.350	2.600	3.100	3.750	4.000	4.000	4.000	4.000	4.000	4.000	4.250	4.438	4.000
Petroleum, crude, water-white.....	Gal.....	.123	.120	.120	.120	.120	.160	.160	.171	.175	.175	.185	.205	.220	.220	.220
Gasoline, motor.....	Gal.....	.168	.140	.120	.240	.240	.240	.240	.241	.245	.245	.245	.245	.245	.245	.245

1 No quotation.

Relative prices.

Article.	July—				1918				1919			
	1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.
FOODSTUFFS.												
<i>(a) Animal.</i>												
Cattle, good to choice steers.....	100	108.4	108.3	117.4	147.6	154.1	178.4	207.2	206.9	216.4	198.3	206.8
Beef, fresh, good native steers.....	100	103.8	101.5	108.5	126.2	134.6	157.7	184.6	188.5	188.5	160.0	176.2
Beef, salt, extra mess.....	100	91.2	92.5	96.4	161.2	166.5	168.6	184.3	187.6	187.6	181.3	172.9
Hogs, heavy.....	100	104.8	87.0	117.5	184.8	194.9	205.0	211.8	213.4	209.7	265.4	175.1
Bacon, short, clear sides.....	100	111.0	87.4	123.6	195.3	220.7	213.4	217.3	225.2	227.6	265.4	178.7
Hams, smoked, loose.....	100	106.6	97.0	114.5	144.0	177.7	185.5	182.3	202.4	210.2	216.9	174.1
Lard, prime, contract.....	100	92.7	73.6	119.1	182.7	227.3	234.5	240.0	241.8	216.4	231.3	214.7
Pork, salt, mess.....	100	105.1	82.3	120.9	188.0	224.3	236.7	215.8	189.1	224.2	288.0	196.4
Sheep, ewes.....	100	96.8	116.7	139.6	183.5	237.8	319.0	234.2	202.0	203.9	173.4	152.7
Mutton, dressed.....	100	92.2	105.8	127.2	140.8	186.4	235.9	199.0	146.6	170.9	198.4	122.3
Butter, creamery, extra.....	100	87.1	84.2	89.0	121.3	157.1	133.9	139.4	178.7	199.4	165.2	208.4
Eggs, fresh, firsts.....	100	82.7	74.8	98.7	140.7	246.5	146.0	165.5	219.9	256.2	184.1	251.8
Milk.....	100	85.7	85.7	88.6	142.9	231.4	168.6	154.3	234.3	260.0	202.9	208.6
<i>(b) Vegetable.</i>												
Wheat, No. 1, northern.....	100	102.6	159.0	133.9	295.4	248.3	248.3	248.3	253.5	254.3	306.6	300.4
Wheat flour, standard patent.....	100	100.2	133.4	133.1	278.1	220.0	217.8	233.5	222.7	224.1	265.2	282.5
Corn, No. 2, mixed.....	100	111.6	125.3	120.3	327.0	284.0	266.4	266.4	221.6	224.2	307.2	224.0
Corn meal.....	100	111.3	109.4	124.0	305.2	302.4	334.6	301.8	210.8	197.0	280.7	184.3
Oats, standard, in store.....	100	98.1	140.7	107.7	203.2	212.5	231.9	203.5	184.3	173.7	203.2	187.8
Rye, No. 2.....	100	97.2	162.9	131.9	350.0	301.1	416.4	268.1	235.5	253.6	273.7	218.2
Rye flour.....	100	85.7	159.5	145.2	329.2	298.6	394.7	302.8	264.4	252.0	232.1	213.8
Barley, fair to good malting.....	100	85.3	118.9	119.4	222.6	245.4	275.5	180.0	153.1	153.0	181.3	207.8
Rice, Honduras, head.....	100	105.9	96.1	88.2	337.3	154.9	170.6	137.3	178.4	175.4	260.8	224.6
Potatoes, white.....	100	106.4	72.3	140.6	386.6	297.2	111.9	168.6	161.7	176.5	274.1	219.9
Sugar, granulated.....	100	97.7	134.9	174.4	174.4	172.1	169.8	172.1	204.7	204.7	204.7	204.7

1 Standard war flour.

WHOLESALE PRICES IN JULY, 1914, 1913, 1916, AND 1917, AND IN CERTAIN MONTHS OF 1915 AND 1919, AS COMPARED WITH AVERAGE PRICES IN 1913—Concluded.

Relative prices—Concluded.

Article.	July—					1918				1919					
	1914	1915	1916	1917		Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.	Nov.	Dec.
TEXTILES AND LEATHER GOODS.															
Cotton, upland, middling.....	100	102.3	71.9	101.6	203.9	253.1	247.7	243.8	253.9	231.3	226.6	274.2	277.3	308.6	307.8
Cotton yarn, carded, 10/1.....	100	97.3	72.4	114.5	191.6	242.5	278.7	289.6	276.0	201.4	188.7	267.4	276.5	300.9	316.3
Sheeting, brown, Pepperell.....	100	95.9	82.2	106.8	191.8	234.2	328.8	(1)	(1)	261.6	205.5	300.0	313.7	(1)	(1)
Bleached muslin, Lonsdale.....	100	103.7	91.5	107.3	195.1	219.5	280.5	304.9	304.9	254.8	214.6	334.1	358.5	358.5	358.5
Wool, 1/4 to 3/8 grades, scoured.....	100	94.3	118.3	145.6	254.8	308.9	308.9	305.1	305.1	254.8	231.6	262.4	262.4	266.4	266.4
Worsted yarn, 2/32s.....	100	83.7	109.4	141.6	205.9	257.4	276.7	276.7	276.7	225.2	193.1	205.9	225.2	(1)	(1)
Clay worsted suitings, 16-ounce.....	100	96.1	109.1	144.7	205.9	257.4	276.7	276.7	276.7	225.2	193.1	205.9	225.2	(1)	(1)
Storm serge, all wool 56-inch.....	100	89.7	95.7	135.0	208.9	232.3	232.3	261.1	291.7	291.7	187.2	217.2	244.0	252.4	252.4
Hides, packers' heavy native steers.....	100	105.4	140.2	146.7	179.3	178.3	147.8	176.1	163.0	152.2	160.3	264.1	262.0	254.9	222.8
Leather, chrome calf.....	100	101.9	103.7	170.4	200.0	196.3	203.7	203.7	223.3	244.4	251.9	407.4	403.0	472.2	472.2
Leather, sole, oak.....	100	105.8	110.2	141.4	181.5	184.9	178.2	184.9	171.5	174.8	183.7	211.6	228.3	228.3	203.8
Shoes, men's, Goodyear welt, vict calf, blucher.....	100	101.2	104.4	120.5	152.6	152.6	160.6	181.3	208.8	208.8	208.8	240.2	289.1	291.0	297.1
Shoes, women's, Goodyear welt, gun metal, button.....	100	103.9	108.1	126.4	160.9	160.9	160.9	206.9	223.0	223.0	223.0	287.3	314.9	314.9	314.9
MINERAL AND METAL PRODUCTS.															
Coal, anthracite, chestnut.....	100	98.6	97.9	103.7	111.7	124.2	119.9	126.0	131.8	151.5	150.9	156.3	160.1	180.5	180.4
Coal, bituminous, run of mine.....	100	100.0	100.0	100.0	227.3	162.7	162.7	186.4	186.4	186.4	181.8	181.8	204.5	186.4	186.4
Coke, furnace, prompt shipment.....	100	78.8	69.0	108.4	591.0	236.4	236.4	236.4	236.4	227.8	183.7	161.3	190.1	234.0	238.4
Copper, electrolytic.....	100	85.4	126.8	168.8	202.5	149.7	149.7	162.4	165.6	129.9	97.5	136.9	138.2	129.9	119.1
Copper wire, bare, No. 8.....	100	88.6	125.7	195.6	202.4	157.5	157.5	170.7	173.7	138.5	104.8	146.1	158.1	148.5	131.1
Pig iron, Bessemer.....	100	87.0	87.3	128.1	335.3	317.4	211.0	213.6	213.6	196.1	171.3	171.3	171.3	182.5	216.0
Steel billets.....	100	73.7	82.9	159.0	387.8	184.2	184.2	184.2	184.2	168.7	149.3	149.3	149.3	160.4	179.9
Tin plate, domestic, coke.....	100	94.2	89.2	165.1	337.3	217.8	217.8	217.8	217.8	206.6	196.7	196.7	196.7	196.7	196.7
Pig tin.....	100	69.3	87.1	186.6	138.1	187.5	196.0	207.6	177.3	159.2	161.5	156.3	124.7	121.2	123.2
Pig lead.....	100	88.6	131.8	156.8	259.1	154.5	159.1	151.7	181.8	127.3	115.9	124.7	145.5	154.5	163.6
Spelter.....	100	87.9	379.3	106.1	160.3	136.2	120.7	151.7	156.9	127.6	112.1	136.2	136.2	139.7	150.0
Petroleum, crude.....	100	71.4	55.1	106.1	126.5	153.1	103.3	136.3	163.3	163.3	163.3	163.3	173.5	181.1	187.8
Petroleum, refined, water-white.....	100	97.6	97.6	97.6	130.1	130.1	136.6	139.0	142.3	142.3	150.4	166.7	178.9	173.9	178.9
Gasoline, motor.....	100	83.3	71.4	142.9	142.9	142.9	142.9	143.5	145.8	145.8	145.8	145.8	145.8	145.8	145.8

¹ No quotation.

Improbability of Decrease in Prices and Cost of Living.

By ROYAL MEEKER, COMMISSIONER OF LABOR STATISTICS.

EVERYBODY is anxiously watching the course of prices and even more anxiously inquiring when, if ever, prices are coming down. The wish is father to the thought, and it is easy for the housewife to accept any statement that prices are slated for a fall in the near future.

Before attempting to answer the query as to when, if ever, prices are to fall, it would be well to consider the causes which have brought about the remarkable rise in prices since 1915. These causes may be summarized as follows:

1. By far the most important cause of increased prices is the enormous additions to the circulating medium, money and its substitutes, during the past four years;

2. Decrease in the actual physical quantities of goods produced and exchanged;

3. Manufacture for and purchase by the Governments of the world for war and other purposes; and

4. Changes in the demands for and the supply of goods and services.

If prices are to be lowered, the causes operating to boost prices must be attacked. The amount of money and checks in circulation must be appreciably reduced and the quantities of necessary goods must be increased in amount. The stocks of commodities manufactured on Government account must, so far as possible, be salvaged and thrown upon the market. The extraordinary demands for goods new and old must either be curtailed or production of these goods expanded to meet the needs.

The financing of the war has made two dollars grow where but one dollar grew before. This, coupled with the fact that there has been an enormous destruction of economic goods and of the farms, mines, forests, and factories supplying these goods, explains the enormous and world-wide decrease in the purchasing power (value) of money, which causes increased prices. As long as the people have twice as many dollars with which to buy a smaller number of commodities, prices are bound to remain high. It will take a long time to deflate the world's inflated currencies or to inflate the world's deflated supply of goods. The profiteer is being blamed on all hands for the increase in prices. Undoubtedly, profiteering of a most reprehensible sort has existed and does exist today, but the profiteer is a result of ever-increasing prices rather than a cause thereof. His

influence in boosting prices is negligible. If all the profiteers in the world could be apprehended and thrown into jail or lined up and shot, it would have no appreciable influence upon prices.

It has been suggested that the abnormally high prices are psychological in origin and that prices will fall just as soon as the people can be made to think falling prices. Of course, psychology is involved in every price, but the larger quantities of currency and the smaller amounts of commodities are physical facts that no psychic legerdemain can overcome.

Higher Prices Possible.

I SEE no prospect of any considerable fall in prices for several years to come. It will be impossible for the Governments of the world to pay off their debts very rapidly. On the contrary, there is every reason to apprehend that credits must be issued to foreign Governments, foreign manufacturers, and foreign business men, in order to rehabilitate the broken and shattered industries of Europe. This being the case, we may expect that larger volumes of checks and credit instruments will be thrown into circulation, thus boosting prices still higher. If it is impossible to reduce the volume of the world's indebtedness suddenly, it is even more impossible to increase the quantity of the world's goods suddenly. Of course, the world's productive forces are being marshaled as rapidly as possibly in order to increase the production from farms, forests, mines, and factories, but this is necessarily a slow process, especially in these times of great business instability and labor unrest. The 1919 farm crops have practically all been marketed. The only way that prices can be brought down before next year's crops begin to find their way to market is through deflation of the currency. As pointed out above, still further inflations are inevitable if Europe is to rehabilitate her industries so that she can increase her supply of material goods and thus bring about lower prices by increasing goods and decreasing debts.

Some business men are apprehensive that the United States will be flooded with European-made goods which will bring prices tumbling down. The price of foreign exchange at the present moment is such as to make it highly profitable for American business men to buy large quantities of goods in Europe, especially in Germany and Austria, if European countries only had the goods to sell. Not until Europe has rehabilitated its industries may we expect to have our markets flooded with European goods. That puts off the tumble in prices several years. The normal seasonal drop in prices may be expected in 1920. This seasonal drop comes much earlier than is

generally supposed. In normal times the low-price level for all commodities combined comes in March, April, or May. These seasonal price changes are relatively small and will have but little effect upon the housewives' expenditures. No great and sudden fall in prices seems possible for a long time.

People generally are yearning so intently for lower prices that they have not thought much about the results of falling prices. The prices we kicked about in 1913 have come to be regarded as ideal. Untold distress has been caused by the rapid price increases of the past four years. The sufferings already endured by the people through rising prices will be multiplied tenfold if prices drop within the next seven years to the 1913 level. A period of falling prices is always a time of business depression, failures, and unemployment.

Production should be speeded up to the limit and debts should be paid not with more debts but with economic goods and services. These processes should be set in motion without delay. It will require several years to readjust industry and trade on a firm basis again. In the meantime, the United States Government should, in my judgment, join with the other leading Governments of the world in the creation of an international commission to study ways and means of setting up a true and relatively constant standard of value to displace the present monetary units which are merely units of weight and consequently variable in value or purchasing power. The most important constructive work that can be done in any field is the establishment of a stable standard of value, so that all the people, rich and poor, employer and employee, bondholder and stockholder, may be spared for all time the agonies of changing price levels.

Retail Prices in Belgium.¹

IN THE October number of the *Revue du Travail* comparative retail prices of household necessities in Belgium are published. The prices given are for Brussels and Antwerp, the capital and the commercial metropolis, respectively, and 10 communes of the central district, an industrial section. These 10 communes on December 31, 1913, had a population of 92,471. According to the industrial census of December 10, 1910, 25,711 or 27.8 per cent of the total population of the district were engaged in industrial occupations.

Data were furnished by the more important cooperative associations in the district and by various commercial firms established prior to 1914. Prices are given for 46 articles.

¹ *Revue du Travail*, Royaume de Belgique. Brussels, Oct. 15, 1919.

The following table gives index numbers for the 46 articles, by three general classes and by months. January to September, 1919, based on prices of April, 1914:

INDEX NUMBERS OF RETAIL PRICES OF 46 ARTICLES, IN BELGIUM, JANUARY TO SEPTEMBER, 1919.

[Prices April, 1914=100.] -

Group.	Apr., 1914.	1919							
		Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug. Sept.
23 articles of prime necessity ¹	100	673	556	469	422	388	384	368	372 367
10 more or less important articles ²	100				405	401	405	382	383 383
13 articles of clothing, heat, and light ³	100	657	634	539	419	403	378	358	352 355
Total (46 articles).....	100	670	584	493	418	394	386	368	369 367

¹ Bread, potatoes, coffee, chicory, rice, sugar, beans, olive oil, vinegar, milk, cheese, salt, margarine, lard, grain, meat, bacon, sausage, fish, vegetables, beer, soap, and rent.

² Cocoa, chocolate, tea, tapioca, macaroni, sardines, wine (ordinary quality), brushes, dusters, and tobacco.

³ Men's clothing, hats, caps, shirts, collars, socks, men's shoes, resoling of shoes, charcoal, firewood, gas, candles, and matches.

In the following table are presented the retail prices of 24 selected articles on specified dates:

RETAIL PRICES IN FRANCS¹ OF 24 SELECTED ARTICLES IN BELGIUM, APRIL, 1914, AND JANUARY TO SEPTEMBER, 1919.

Article.	Unit.	Apr., 1914.	1919							
			Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug. Sept.
		Frs.	Frs.	Frs.	Frs.	Frs.	Frs.	Frs.	Frs.	Frs.
Bread, home-made.....	Kilo...	0.275	0.80	0.80	0.80	0.80	0.80	0.85	0.85	0.85
Potatoes.....	do...	.10	1.00	.80	.50	.30	.30	.30	2.75	.25 .18
Coffee, roasted.....	do...	2.50	9.00	9.00	8.00	7.00	6.00	6.00	5.50	5.50 5.50
Rice.....	do...	.42	3.25	3.25	2.00	2.00	2.00	2.00	2.00	2.10 2.10
Sugar, white.....	do...	.65	2.00	2.00	2.00	2.00	2.00	1.95	1.95	1.95 1.95
Olive oil.....	Liter...	2.75	7.00	7.00	7.00	6.50	7.00	6.50	6.50	7.00 6.50
Milk, skimmed.....	do...	.20	.65	.65	.65	.60	.60	.50	.50	.60 .65
Salt, table.....	Kilo...	.10	.50	.50	.50	.50	.30	.30	.30	.30 .30
Margarine, "Axa".....	do...	2.00				4.80	4.80	4.80	4.80	4.80 5.00
Beef, roast, without bone.....	do...	3.00	13.00	12.00	12.00	12.00	12.00	11.00	10.00	10.00 10.00
Beef, boiling, plate, side.....	do...	1.70	8.00	8.00	8.00	7.00	7.00	6.00	6.00	6.00 5.00
Pork chops.....	do...	2.40	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00 13.00
Bacon.....	do...	2.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00 11.00
Codfish.....	do...	2.00	6.00	6.00	6.00	6.00	5.00	5.00	5.00	6.00 6.00
Eggs.....	Each... 10		1.25	1.00	.75	.50	.55	.60	.60	.68 .70
Soap, soft.....	Kilo... 35		6.00	6.00	2.90	2.50	2.50	3.00	2.60	2.60 2.40
Chocolate.....	400 gr. 1.10					2.80	2.80	2.80	2.80	2.80 2.80
Tapioca.....	Kilo... 1.20				3.60	3.60	3.60	3.60	3.60	3.60 3.60
Macaroni.....	do... .75				2.20	2.20	2.20	2.20	2.20	2.20 2.20
Clothing, men's, custom-made suits.....	Each... 45.00		275.00	275.00	275.00	160.00	160.00	160.00	160.00	160.00 160.00
Hats, felt.....	do... 5.00		25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00 25.00
Shirts, ordinary quality.....	do... 4.25		22.50	21.00	18.00	14.50	14.50	14.50	14.50	14.50 14.50
Socks, men's, wool.....	Pair... 1.75		18.00	18.00	18.00	14.95	14.95	11.75	11.75	11.75 11.75
Shoes, men's.....	do... 18.00		225.00	225.00	225.00	85.00	85.00	85.00	85.00	85.00 85.00

¹ The normal par value of the franc is 19.3 cen^t

There has been but little variation in prices since May. Roast beef declined from 12 francs per kilo in May to 11 francs in June, and to 10 francs in July. Soap was higher in June by five-tenths of a franc than in May, but lower in September than at any time in 1919. Prices of clothing and hosiery have remained practically stationary since April.

Bread and pork are the only articles for which prices in September were higher than in January. Since January, 1919, coffee has declined 38.9 per cent; rice, 35.4 per cent; table salt, 40 per cent; roast beef, 23.1 per cent; boiling beef, 37.5 per cent; eggs, 44 per cent; men's suits, 41.8 per cent; and men's shoes, 62.2 per cent.

Rent has remained stationary through the entire period.

Prices of Food and Fuel in Norway in 1914, 1917, 1918, and 1919.

THE United States consul general at Christiania reports¹ that an official estimate places the increase in the cost of necessities of life at 175 per cent in the period from July, 1914, to June, 1919, and that prices in July, 1919, increased about 2 per cent over the June prices. This estimate includes rent, taxes, clothing, fuel, and the staple foodstuffs. It is stated that the cost of foodstuffs alone has not increased materially since May, 1919. In this connection the consul general transmits the following table of average market quotations for 21 principal cities in Norway, issued by the Bureau of Statistics (official) at Christiania:

¹ United States Department of Commerce. Commerce Reports, Dec. 26, 1919, p. 1742.

AVERAGE RETAIL PRICES OF FOOD AND FUEL IN 21 CITIES IN NORWAY IN SPECIFIED
MONTHS IN 1914 AND 1917 TO 1919.

Commodity.	Unit.	July, 1914.	July, 1917.	July, 1918.	May, 1919.	June, 1919.	July, 1919.
Beef:							
Fresh roast.....	Kilo ¹	\$0.38	\$0.86	\$1.54	\$1.59	\$1.58	\$1.58
Meat for soup.....	do.....	.33	.77	1.41	1.38	1.38	1.36
Mutton:							
Fresh, hind quarter.....	do.....	.40	.96	1.57	1.40	1.41	1.39
Fresh, fore quarter.....	do.....	.38	.93	1.44	1.32	1.33	1.32
Salted.....	do.....	.29	.77	.93	1.31	1.35	1.32
Veal:							
Fattened, roast.....	do.....	.39	.89	1.60	1.31	1.31	1.43
Fore quarter.....	do.....	.35	.84	1.47	1.42	1.28	1.29
Sucklers.....	do.....	.28	.54	.90	1.24	.80	1.24
Pork:							
Fresh.....	do.....	.36	.91	1.37	1.45	1.46	1.46
Salted, Norwegian.....	do.....	.39	.91	1.35	1.51	1.51	1.48
Salted, American.....	do.....	.42	.88	.83	.99	.97	1.06
Codfish:							
Fresh.....	do.....	.12	.246	.261	.205	.209	.198
Salted.....	do.....	.11	.204	.19	.194	.191	.26
Milk:							
Whole.....	Liter ²	.04	.079	.128	.139	.138	.138
Skimmed.....	do.....	.02	.037	.052	.052	.047	.049
Butter:							
Dairy.....	Kilo.....	.66	1.21	1.89	1.94	1.93	1.92
Farmers'.....	do.....	.60	1.12	1.71	1.90	1.91	1.88
Margarine:							
Prime.....	do.....	.39	.62	1.31	.85	.85	.88
Cheapest.....	do.....	.29	.67	.92	.81	.80	.81
Cheese:							
Goat.....	do.....	.44	.92	1.16	1.34	1.34	1.36
Whey.....	do.....	.15	.41	.44	.55	.57	.57
Spiced.....	do.....	.23	.68	.78	.80	.80	.78
Eggs, fresh.....	Twenty.....	.44	.95	1.66	1.58	1.63	1.76
Flour:							
Wheat.....	Kilo.....	.08	.222	.245	.204	.194	.19
Rye.....	do.....	.05	.195	.242	.208	.192	.19
Potato.....	do.....	.13	.361	.337	.503	.490	.49
Bread:							
Rye.....	do.....	.61	.188	.....	.208	.194	.193
Composition.....	do.....	.....	.094	.125	.117	.117	.118
Peas, yellow.....	do.....	.93	.337	.402	.396	.399	.396
Barley, whole.....	do.....	.072	.234	.81	.226	.217	.211
Rice, whole.....	do.....	.128	.286	.281	.321	.228	.227
Oats, whole:							
Norwegian.....	do.....	.093	.231	.281	.202	.201	.194
American.....	do.....	.083	.214	.247	.201	.291	1.89
Potatoes.....	5 liters ³	.134	.175	.253	.198	.163	.147
Coffee:							
Java.....	Kilo.....	.75	1.07	1.318	1.323	1.31	1.28
Guatemala.....	do.....	.66	.98	1.179	1.066	1.18	1.19
Santos, Rio.....	do.....	.596	.846	.86	.991	1.01	1.04
Sugar:							
Lump.....	do.....	.152	.385	.383	.402	.418	.418
Granulated.....	do.....	.139	.292	.324	.308	.308	.308
Petroleum:							
Water white.....	5 liters.....	.256	.49	.624	.509	.485	.498
Ordinary standard white.....	do.....	.227	.46	.56	.501	.501	.482
Coal.....	100 kilos.....	.728	6.18	5.31	3.13	3.17	3.53
Coke.....	Hectoliter ⁴	.463	2.88	2.97	1.61	1.66	1.77
Wood, pine.....	Metric cord ⁵	4.63	10.66	13.87	13.58	13.46	13.97

¹ 1 kilo=2.205 pounds.² 1 liter=1.057 quarts.³ 1 liter (dry)=0.1135 peck.⁴ 1 hectoliter=2.838 bushels.⁵ 1 metric cord=128 cubic feet.

WAGES AND HOURS OF LABOR.

Hours and Earnings in the Hosiery and Underwear and Silk Industries.

THE industrial survey made by the Bureau of Labor Statistics early in 1919¹ included an investigation of hours and earnings in the hosiery and underwear and silk industries. A summary presentation of the results of this investigation is given in this article, particularly in Table 4.

The data for the silk industry, except so far as it relates to silk throwing or to the dyeing of silk goods, was obtained only from establishments engaged in the manufacture of broad silks or ribbon silks. The States included in the survey of the two industries covered by this article, the number of establishments, and the number employees listed in each State are shown in the following table:

TABLE 1.—NUMBER OF ESTABLISHMENTS AND NUMBER OF EMPLOYEES IN THE HOSE AND UNDERWEAR AND SILK INDUSTRIES, BY STATES.

State.	Hosiery and underwear.				Silk.			
	As reported by Census Bureau.		Bureau of Labor Statistics survey.		As reported by Census Bureau.		Bureau of Labor Statistics survey.	
	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.
Connecticut.....	25	2,904	3	539	44	10,668	3	1,337
Georgia.....	22	3,468	2	254	.....	.....	.....	.....
Illinois.....	46	3,535	2	426	.....	.....	.....	.....
Indiana.....	11	2,338	2	945	.....	.....	.....	.....
Massachusetts.....	77	10,635	4	3,506	19	4,495	2	1,547
Michigan.....	34	2,714	4	755	.....	.....	.....	.....
Minnesota.....	13	2,088	2	1,944	.....	.....	.....	.....
New Hampshire.....	20	3,328	4	703	.....	.....	.....	.....
New Jersey.....	.....	.....	.....	.....	368	28,263	10	2,732
New York.....	483	40,095	4	1,022	143	11,659	6	574
North Carolina.....	74	7,787	4	758	.....	.....	.....	.....
Ohio.....	38	3,411	4	381	.....	.....	.....	.....
Pennsylvania.....	498	41,130	4	1,945	284	44,755	6	1,818
Rhode Island.....	.....	.....	.....	.....	12	2,325	4	1,236
Tennessee.....	26	5,690	4	1,425	.....	.....	.....	.....
Virginia.....	13	2,270	4	577	9	691	2	119
Wisconsin.....	68	6,244	4	913	.....	.....	.....	.....
Total.....	1,448	137,637	51	16,093	879	102,856	33	9,363

¹ A brief summary of this survey appeared in the MONTHLY LABOR REVIEW for September, 1919 (pp. 176-189), and articles dealing with specific industries have appeared in subsequent issues, except November.

It was not possible to arrange the survey in such a way as to obtain the records of all establishments in an industry for the same pay-roll period. Industry was in a very unsettled state during the progress of the survey. Conditions changed so rapidly that the exact date of the material presented is a matter of more importance than it would be in a normal year. The pay-roll periods included in each industry were distributed by months as shown in the following table:

TABLE 2.—NUMBER OF PAY-ROLL PERIODS IN SPECIFIED MONTHS.

Industry.	Total number of pay-roll periods.	Number of pay-roll periods in—								
		1918				1919				
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
Hosiery and underwear.....	51	.....	.....	.....	4	9	5	17	12	4
Silk.....	33	1	.....	.....	15	13	2	2	.....	.....

It will be seen that in the hosiery and underwear industry 43 of the 51 schedules covered pay-roll periods in the first 4 months of 1919; in the silk industry 28 of the 33 schedules fell in December, 1918, and January, 1919. The material is presented as of the year 1919. So far as could be ascertained no change in rates of pay occurred in either industry during the progress of the survey.

The information concerning hours and earnings on which the tables are based was obtained directly from the pay rolls or other records of the companies by agents of the Bureau. Other information was obtained from responsible officials in personal interviews. Wherever the records of the company failed to indicate the time actually worked by pieceworkers during the selected pay-roll period, arrangements were made to have such a record kept for a future period. In all cases the figures copied by the agents represented the hours actually worked and earnings actually received.

Method of Making Computations.

AS THE material comes in to the office the figures for hours and those for earnings are both in incommensurable form on account of inequalities in the length of pay-roll periods and in the time worked by different individual employees. Before they can be presented in tabular form it is necessary to reduce both hours and earnings to a common denominator. The comparable figures selected for use in the following tables are hours worked per day and per week, and earnings per hour and per week. These figures are obtained in the following manner:

The hours per day of each employee are obtained by dividing the number of hours worked by him during the pay-roll period by the number of week days, holidays omitted, in the pay-roll period. Thus in the case of pay rolls for a single week containing no holidays, the hours worked by each employee during the pay-roll period are divided by six, whether the employee worked on each of the six days or not. Similarly the hours actually worked by an employee in any establishment during a pay-roll period containing 13 workdays were divided by 13, regardless of the number of days on which the employee worked. The resulting figure represents the number of hours per day that the employee would have worked if his time had been distributed uniformly among the week days of the pay-roll period.

All one-week pay rolls included in the survey of these industries were six-day pay rolls. The half monthly periods, however, showed considerable differences in length. The following table shows for each industry the number of schedules covering each specified number of workdays:

TABLE 3.—SCHEDULE DISTRIBUTION BY NUMBER OF WORK DAYS IN PAY-ROLL PERIOD.

Industry.	Number of schedules in pay-roll period covering—			
	One week or 6 work days.	Two weeks, one- half month, or—		Total number of sched- ules.
		12 work- days.	13 work- days.	
Hosiery and underwear	33	14	4	51
Silk	5	28	—	33
Total	38	42	4	84

It will be seen from this table that in the hosiery and underwear industry there is a great preponderance of one-week pay-roll periods, with two-week pay-roll periods in second place, whereas in the silk industry the situation is reversed, with 82 per cent in the 12-day column.

By using the average number of hours per week day as a factor it is possible to obtain a figure for the average number of hours worked per week by multiplying that factor in every case by 6. With one-week pay rolls the result represents approximately the original figure for hours per week actually worked. Such variations as are found are due to the fact that the average hours per day as given in the table are the averages of the hours of individual employees, with no weight to represent the proportion of the pay-roll period worked by different individuals.

In the case of longer pay rolls, however, the resulting figure is hypothetical. It represents the number of hours per week that the employees would have worked in a six-day week if their working hours had been distributed uniformly over the week days of the entire pay-roll period.

This figure of hours worked per week is no more useful for comparisons of hours in different occupations or industries than is the figure of hours per day. It has the advantage, however, of enabling comparisons to be drawn between the hours actually worked on the average by people in each occupation and the full-time hours of the same occupation.

By full-time hours per week is meant the number of hours that is thought of in the occupation as constituting a normal week's work—the number of hours the employee regularly expects to work and the employer expects him to work. This figure was obtained from the officials of the various establishments by agents of the Bureau. The difference between average actual hours per week and average full-time hours per week is an indication of the degree of irregularity of employment among the employees to whom the figures apply.

Combining hours per day or hours per week computed from the records of one-week pay rolls with those computed from longer pay rolls diminishes slightly the comparability of the resulting averages. The nature and extent of this influence have been pointed out at some length in a previous article on the results of the industrial survey.¹ The effect of this influence is not sufficiently great, however, to prevent the use of the figures for average hours per day or per week as the basis of general comparisons between different industries, occupations, or localities.

For comparative purposes the earnings of each employee are reduced to the form of average earnings per hour by dividing his total earnings for the pay-roll period by the total number of hours worked by him during the period. The resulting figure indicates how much he would have earned each hour he worked if his earnings had been distributed uniformly over all the hours actually worked by him during the period.

By multiplying the average hourly earnings of a group by the previously computed average hours per week worked by the same group, a figure is obtained which represents very closely the average actual weekly earnings of the group. In the case of one-week pay rolls this process brings us back practically to the average actual earnings for the week as computed.

In one respect the figure for actual weekly earnings computed in the manner just described falls short of mathematical exactness. It

¹ See MONTHLY LABOR REVIEW for January, 1920, pp. 121 and 122.

is assumed in computing weekly earnings in this manner that employees work the same number of hours on Saturday as on other week days. If in fact the hours on Saturday are fewer than the hours on other week days, the earnings thus computed will be exact only for those employees for whom Saturdays constitute exactly one-sixth of the total number of days worked by them. Careful experiment has shown, however, that the variations so nearly offset one another that the net result is a departure of a few cents at the most from theoretical accuracy.

In the detailed table which follows it has been necessary to omit a number of occupations owing to space limitations. In the hosiery and underwear industry 8 occupations have been included out of a total of 14 for whom data were obtained in the survey. In addition a number of occupations have been combined for present purposes which have been given separately in previous reports on the same industries. The selected occupations include 14,660 employees out of a total of 16,093 for whom information was obtained. In the silk industry the table covers seven occupations out of a total of 12, and 7,719 employees out of a total of 9,363.

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN THE HOSIERY AND UNDERWEAR AND SILK INDUSTRIES, BY OCCUPATION, SEX, AND STATE.

Hosiery and underwear.

Occupation, sex, and State.	Number of establishments.	Number of employees.	Average actual hours worked—			Full-time hours per week.	Average actual earnings made—			Full-time earnings per week.
			During one pay period.		Per week day.		During one pay period.		Per hour.	
			Weekly pay period.	Biweekly and semi-monthly pay periods.			Weekly pay period.	Biweekly and semi-monthly pay periods.		
<i>Cutters, hand, male.</i>										
Connecticut.....	2	5	58.7	.....	9.8	58.7	\$23.16	.....	\$0.418	\$23.97
Massachusetts.....	2	20	45.6	.....	7.6	45.6	17.11	.....	.371	17.83
New York.....	3	15	54.1	99.3	8.7	52.2	20.39	\$37.70	.374	20.57
North Carolina.....	2	16	56.5	.....	9.4	56.5	17.69	.....	.314	17.69
Tennessee.....	2	9	45.9	.....	7.7	45.9	12.86	.....	.276	12.86
Virginia.....	2	8	50.3	.....	8.4	50.3	20.81	.....	.417	20.81
Other States.....	4	13	51.1	96.0	8.5	51.0	21.55	61.35	.444	22.44
Total.....	17	86	50.9	98.9	8.5	51.0	18.53	40.66	.369	19.53
<i>Knitters, male.</i>										
Connecticut.....	4	8	55.7	.....	9.3	55.7	20.93	.....	.376	20.93
Georgia.....	4	51	48.6	.....	8.1	48.6	13.53	31.83	.297	14.43
Illinois.....	2	94	.....	95.1	7.9	47.4	.....	50.72	.500	23.70
Indiana.....	4	237	.....	103.0	8.0	48.0	.....	59.67	.624	29.95
Massachusetts.....	4	262	41.2	.....	6.9	41.2	19.16	.....	.461	19.16
Michigan.....	2	8	54.0	84.6	7.5	45.0	17.00	32.03	.344	15.48
New Hampshire.....	6	93	48.9	.....	8.1	48.9	17.99	.....	.368	18.60
New York.....	5	56	52.3	.....	8.3	49.8	19.86	43.52	.417	22.92
North Carolina.....	5	53	54.6	.....	8.1	48.6	20.93	23.53	.357	17.35
Ohio.....	2	3	61.4	108.0	9.8	51.3	23.86	30.90	.349	20.52
Pennsylvania.....	5	158	57.2	101.4	8.5	53.8	27.69	58.08	.564	28.76
Tennessee.....	5	59	49.6	90.3	8.0	48.0	15.85	31.22	.326	15.85
Virginia.....	7	52	47.3	.....	7.9	47.3	16.88	.....	.354	16.88
Wisconsin.....	3	45	54.9	.....	9.2	54.9	.....	.....	.555	29.93
Other States.....	1	2	57.0	.....	9.5	57.0	19.53	.....	.343	19.53
Total.....	50	1,131	46.6	97.0	7.8	46.8	19.49	53.28	.480	24.65

<i>Machine fixers, male.</i>									
Connecticut.....	3	9	50.4	8.4	50.4	55.0	24.39	499	24.39
Georgia.....	2	35	60.0	9.2	55.2	50.7	23.88	425	23.40
Illinois.....	2	17	.....	8.7	52.2	57.5	.....	459	26.38
Indiana.....	2	44	.....	8.4	50.4	49.5	.....	600	32.67
Massachusetts.....	3	84	43.8	6.9	43.8	48.0	23.45	542	25.97
Michigan.....	4	20	53.8	9.2	55.2	54.0	27.48	488	26.94
New Hampshire.....	4	20	54.9	9.2	55.2	52.5	24.80	452	26.35
New York.....	3	9	57.8	9.5	57.0	55.0	26.51	481	27.42
North Carolina.....	3	38	59.8	8.8	52.8	59.8	26.63	457	24.13
Ohio.....	4	6	50.0	8.5	51.0	51.0	28.88	574	29.29
Pennsylvania.....	4	43	50.2	9.4	56.4	53.5	41.98	640	34.24
Tennessee.....	4	27	56.7	9.4	56.4	55.9	22.88	416	23.46
Virginia.....	4	16	54.0	8.9	54.0	55.4	27.45	504	27.94
Wisconsin.....	3	34	56.1	9.4	56.1	53.1	30.60	537	27.21
Other States.....	1	22	.....	8.6	51.6	50.0	.....	431	21.53
Total.....	47	425	51.9	8.6	51.6	54.5	26.15	506	26.11
<i>Winders, male.</i>									
New York.....	3	11	59.6	6.8	40.8	54.5	18.90	366	14.93
Other States.....	6	35	45.1	7.7	46.2	53.1	18.92	348	16.03
Total.....	9	46	48.3	7.5	45.0	53.4	18.92	352	15.84
<i>Cutters, female.</i>									
Connecticut.....	3	10	51.4	8.6	51.4	55.3	12.25	239	12.25
Massachusetts.....	2	164	45.1	7.5	45.1	48.0	15.88	354	15.88
Michigan.....	2	30	51.8	8.5	51.0	54.0	13.39	241	12.29
New Hampshire.....	2	18	44.7	7.4	44.7	54.0	13.04	289	13.04
New York.....	2	20	49.5	8.3	49.5	54.0	13.44	273	13.44
Ohio.....	2	15	34.2	6.8	34.2	50.0	10.41	256	10.41
Tennessee.....	2	20	47.6	8.0	47.6	55.3	10.66	220	10.66
Virginia.....	2	5	41.9	7.0	41.9	54.1	9.91	235	9.91
Wisconsin.....	3	34	43.8	7.3	43.8	51.4	12.17	274	12.17
Other States.....	2	260	.....	6.9	41.4	50.0	.....	324	13.41
Total.....	22	588	45.4	7.3	43.8	50.4	14.04	313	13.71
<i>Finishers, female.</i>									
Connecticut.....	3	98	49.7	8.3	49.7	55.0	12.34	248	12.34
Massachusetts.....	2	515	45.8	7.6	45.8	48.0	16.01	348	16.01
Michigan.....	2	110	41.8	7.7	46.2	51.0	10.78	247	11.41
Minnesota.....	2	682	54.0	7.6	45.6	50.0	9.90	318	14.50
New Hampshire.....	2	109	47.1	7.9	47.1	54.0	13.25	283	13.25
New York.....	4	294	48.2	7.7	46.2	54.0	13.43	316	14.65
North Carolina.....	4	146	54.9	9.1	54.9	59.5	17.63	317	17.63
Ohio.....	2	101	44.2	7.4	44.2	50.0	11.68	267	11.68
Pennsylvania.....	2	196	50.8	8.0	48.0	51.4	14.88	271	13.01

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN THE HOSIERY AND UNDERWEAR AND SILK INDUSTRIES, BY OCCUPATION, SEX, AND STATE—Continued.

Hosiery and underwear—Continued.

Occupation, sex, and State.	Number of establishments.	Number of employees.	Average actual hours worked—			Full-time hours per week.	Average actual earnings made—			Full-time earnings per week.
			During one pay period.		Per week day.		During one pay period.		Per hour.	
			Weekly pay period.	Biweekly and semi-monthly pay periods.			Weekly pay period.	Biweekly and semi-monthly pay periods.		
<i>Finishers, female—Concluded.</i>										
Tennessee.....	3	237	51.0	.....	8.5	51.0	\$11.17	.....	\$0.218	\$11.17
Virginia.....	2	113	48.9	.....	8.2	48.9	11.49	.....	.233	12.43
Wisconsin.....	2	124	43.7	.....	7.3	43.7	11.56	.....	.264	13.55
Total.....	28	2,715	47.9	95.5	7.9	47.4	13.80	\$30.39	.279	15.32
<i>Inspectors, menders, and folders, female.</i>										
Connecticut.....	3	122	46.4	.....	7.7	46.4	10.41	.....	.227	12.47
Georgia.....	2	135	55.1	82.9	7.3	43.8	11.74	18.26	.219	12.06
Illinois.....	2	146	.....	93.3	7.2	43.2	.....	28.87	.309	17.42
Indiana.....	2	175	.....	58.6	7.3	43.8	.....	21.73	.247	12.25
Massachusetts.....	4	549	42.3	83.4	7.0	42.0	14.43	23.43	.339	16.25
Michigan.....	4	137	40.3	83.2	6.9	41.4	8.91	16.13	.195	10.51
New Hampshire.....	4	100	39.2	.....	6.7	38.2	10.57	29.23	.277	13.90
New York.....	4	123	46.8	91.9	7.8	46.8	11.54	13.44	.232	14.42
North Carolina.....	4	198	50.8	67.6	6.9	41.4	13.85	19.80	.178	10.66
Ohio.....	4	74	48.1	97.0	7.9	47.4	10.90	23.38	.247	13.57
Pennsylvania.....	4	255	50.3	97.4	8.0	48.0	14.80	17.78	.186	10.41
Tennessee.....	4	103	47.0	84.9	7.7	46.4	9.43	10.56	.198	10.56
Virginia.....	4	103	46.7	.....	7.7	46.7	13.84	14.50	.283	14.50
Wisconsin.....	4	124	47.9	.....	8.0	47.9	13.84	13.32	.300	15.00
Other States.....	1	296	47.9	91.7	7.4	44.4	.....	.....	.....	.....
Total.....	50	2,690	45.0	88.4	7.4	44.4	12.26	23.17	.265	13.85
<i>Knitters, female.</i>										
Connecticut.....	8	120	46.3	.....	7.7	46.3	11.20	.....	.240	13.21
Georgia.....	3	121	63.1	.....	8.2	63.1	13.77	26.07	.270	15.75

		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	12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TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN THE HOSIERY AND UNDERWEAR AND SILK INDUSTRIES, BY OCCUPATION, SEX, AND STATE—Continued.

Hosiery and underwear—Concluded.

Occupation, sex, and State.	Number of establishments.	Number of employees.	Average actual hours worked—			Average actual earnings made—				Full-time earnings per week.
			During one pay period.		Per week, day.	During one pay period.		Per hour.	Per week.	
			Weekly pay period.	Biweekly and semi-monthly pay periods.		Weekly pay period.	Biweekly and semi-monthly pay periods.			
<i>Winders, female.</i>										
Connecticut.....	3	41	46.6	75.7	7.8	46.6	\$11.22	\$0.240	\$11.22	\$13.17
Indiana.....	2	68	44.5	93.5	7.7	46.2	13.59	.248	11.46	12.30
Massachusetts.....	4	383	43.3	86.0	7.5	46.0	9.72	.311	14.00	15.08
Michigan.....	3	57	47.8	86.0	7.2	43.2	9.72	.238	10.28	12.88
New Hampshire.....	3	29	49.1	88.6	8.0	47.8	13.27	.273	13.84	14.07
New York.....	4	147	49.1	100.7	7.9	47.4	13.28	.313	14.84	17.02
Ohio.....	4	17	47.1	97.8	7.9	47.4	11.17	.207	9.81	9.85
Pennsylvania.....	4	168	43.5	97.8	8.0	48.0	14.45	.247	11.86	13.18
Tennessee.....	3	97	46.3	55.8	7.7	46.3	9.52	.203	9.52	11.34
Virginia.....	3	14	46.6	51.4	7.8	46.6	12.13	.259	12.13	13.33
Wisconsin.....	4	47	47.1	52.5	7.9	47.1	13.57	.283	13.57	14.84
Other States.....	4	188	53.0	99.4	8.3	49.8	13.06	.242	12.05	13.48
Total.....	41	1,250	46.6	92.6	7.8	46.8	12.08	.271	12.68	14.09

Silk.

<i>Laborers, dyehouse, male.</i>									
Connecticut.....	2	110	46.2	95.2	7.7	46.2	.....	\$0.383	\$18.68
Massachusetts.....	2	24	49.3	102.5	8.3	49.8	.....	.313	16.58
New Jersey.....	2	859	.....	93.7	8.0	46.9	.....	.419	21.59
Pennsylvania.....	3	416	51.0	92.9	8.0	48.0	.....	.417	20.02
Other States.....	1	2	51.4	.....	8.6	51.4	.....	.185	9.99
Total.....	10	1,411	48.9	93.6	8.0	48.0	19.65	.414	22.01

Loom fixers, male.

Connecticut.....	3	65	47.8	103.1	8.1	48.6	50.6	28.22	47.27	.563	27.36	28.44
Massachusetts.....	2	41	54.0	96.6	8.2	49.2	50.6	24.33	55.10	.563	27.21	27.92
New Jersey.....	6	58	50.0	97.6	8.2	49.2	50.0	28.54	56.69	.580	28.54	29.01
New York.....	6	27	48.2	104.9	8.1	50.1	50.0	26.77	51.33	.518	26.11	26.32
Pennsylvania.....	4	47	.....	107.7	9.0	53.9	53.6	.....	53.91	.501	26.96	26.82
Rhode Island.....	4	33	53.6	108.1	9.0	54.0	54.0	29.42	60.26	.554	29.02	29.90
Virginia.....	2	8	55.0	112.9	9.1	56.4	55.0	23.00	55.51	.164	26.17	25.64
Total.....	27	279	49.4	102.7	8.1	50.4	51.5	27.85	54.95	.546	27.52	28.09

Spinners, male.

Massachusetts.....	2	21	.....	87.5	7.3	43.8	53.6	.....	24.67	.274	12.34	14.68
New Jersey.....	2	35	.....	110.1	9.2	55.1	55.6	.....	55.53	.476	27.77	27.63
Pennsylvania.....	3	42	.....	81.5	6.8	40.8	52.7	.....	18.38	.217	11.47	11.47
Rhode Island.....	2	9	54.7	150.3	9.5	57.0	54.0	27.63	49.39	.487	27.76	26.30
Total.....	9	107	54.7	93.6	7.9	47.4	53.9	27.63	33.16	.342	16.21	18.48

Twisters-in, male.

Connecticut.....	3	37	46.0	101.1	7.8	46.8	50.7	21.92	47.33	.464	21.72	23.49
Massachusetts.....	2	38	.....	100.7	8.4	50.4	50.7	.....	46.26	.458	23.13	23.09
New Jersey.....	5	34	.....	94.2	7.8	47.1	50.0	.....	50.40	.612	28.20	30.45
New York.....	5	16	52.2	118.2	9.5	57.0	51.6	22.22	50.09	.461	28.28	23.75
Pennsylvania.....	3	10	.....	89.8	7.5	44.9	54.0	.....	38.11	.436	19.06	23.60
Rhode Island.....	4	23	51.9	82.8	7.1	44.4	54.0	18.37	45.69	.452	20.07	24.42
Virginia.....	2	7	55.0	99.7	8.7	52.2	55.0	9.83	55.44	.390	20.36	21.47
Total.....	24	165	48.5	97.7	8.1	48.6	51.5	20.41	49.86	.486	23.62	24.91

Warpers, male.

New Jersey.....	4	59	.....	96.1	8.0	48.1	50.0	.....	58.37	.590	29.19	29.32
Virginia.....	2	8	55.0	87.0	8.0	48.0	55.0	23.33	39.49	.443	24.34	24.34
Other States.....	2	4	.....	102.5	8.6	51.3	51.9	.....	30.69	.302	15.35	15.55
Total.....	8	71	55.0	95.8	8.0	48.0	50.7	23.33	55.31	.558	26.78	28.15

Weavers, broad silk, male.

Connecticut.....	3	327	.....	90.5	7.5	45.3	50.8	.....	43.68	.481	21.84	24.38
Massachusetts.....	2	218	.....	96.9	8.1	48.5	51.3	.....	42.26	.434	21.13	22.54
New Jersey.....	4	348	.....	95.1	7.9	47.6	50.0	.....	46.83	.492	23.42	24.59
New York.....	5	92	.....	97.0	8.2	48.5	51.5	.....	44.73	.460	22.37	23.57
Pennsylvania.....	4	43	.....	101.9	8.5	51.0	53.9	.....	47.39	.467	23.70	25.16
Rhode Island.....	4	358	.....	100.0	8.3	50.0	54.0	.....	48.01	.476	24.01	25.71
Virginia.....	2	23	.....	94.4	7.9	47.2	53.0	.....	38.83	.413	19.42	22.42
Total.....	24	1,499	.....	95.9	8.0	48.0	51.7	.....	45.44	.473	22.70	24.43

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN THE HOSIERY AND UNDERWEAR AND SILK INDUSTRIES, BY OCCUPATION, SEX, AND STATE.—Concluded.

Silk.—Concluded.

Occupation, sex, and State.	Number of establishments.	Average actual hours worked—				Average actual earnings made—			
		During one pay period.		Full-time hours per week.	Per week.	During one pay period.		Full-time earnings per week.	
		Weekly pay period.	Biweekly and semi-monthly pay periods.			Weekly pay period.	Biweekly and semi-monthly pay periods.		
<i>Spinners, female.</i>									
Connecticut.....	2	109	45.3	7.5	45.3	50.1	\$12.97	\$0.285	\$12.97
New Jersey.....	2	20	.....	8.6	51.5	50.0	.....	.316	16.23
Pennsylvania.....	2	105	.....	7.4	44.5	50.7	.....	.213	9.55
Other States.....	2	138	.....	7.3	41.0	50.2	.....	.305	13.14
Total.....	8	372	45.3	7.5	45.0	50.3	12.97	.274	12.33
<i>Thistlers-in, female.</i>									
Connecticut.....	2	29	45.3	7.6	45.6	50.1	12.89	.281	12.81
New Jersey.....	3	23	.....	7.5	45.2	50.0	.....	.477	21.70
New York.....	4	10	47.1	8.2	49.2	50.1	17.43	.325	15.99
Pennsylvania.....	3	22	.....	7.3	43.9	53.1	.....	.277	12.20
Other States.....	1	27	54.5	9.1	54.5	51.0	16.20	.297	16.20
Total.....	13	111	49.6	7.9	47.4	51.6	14.67	.329	15.59
<i>Warpers, female.</i>									
Connecticut.....	3	66	46.9	7.8	46.8	51.6	16.08	.336	15.72
Massachusetts.....	2	92	.....	7.9	47.3	51.0	.....	.388	17.33
New Jersey.....	5	131	94.6	7.6	45.7	50.0	.....	.335	17.69
New York.....	6	47	53.1	8.0	48.0	51.1	14.72	.320	15.36
Pennsylvania.....	4	110	96.8	8.1	48.4	53.5	.....	.301	14.77
Rhode Island.....	3	90	51.0	8.6	51.6	51.0	19.47	.392	20.23
Total.....	23	536	50.9	8.0	48.0	51.9	17.44	.354	16.99
Total.....	23	536	50.9	8.0	48.0	51.9	17.44	.354	16.99
Total.....	23	536	50.9	8.0	48.0	51.9	17.44	.354	16.99

The last previous investigation made by the Bureau into labor conditions in the hosiery and underwear and the silk industries were carried out in the year 1914. The following table gives relative hours and earnings for selected occupations in the two industries for which the Bureau had the necessary data. The figures for 1913 are in all cases used as the base. The comparison is necessarily confined to those occupations for which the requisite information in comparable form is at hand.

Method of Computing Industry Relative.

THE table also gives a relative (or index number) for each industry as a whole. It seems desirable to point out certain features of the method by which these relatives were computed. In the first place the averages of hours and earnings on which the 1919 relative is based cover only selected occupations. In earlier years the relatives have been based on all wage-earning employees found in the establishments visited. The employees who did not fall within any of the selected occupations were grouped in the tables under the caption "Other employees." This was done not because of any value that was supposed to attach to figures for this heterogeneous group, but because it was feared that the omission of these employees might seriously affect the averages for the industry as a whole. Careful experiments carried out by the Bureau indicate that, if the selected occupations include low-paid groups, such as laborers, in proportion to their numbers in the industry, the omission of "other employees" has little effect upon industry averages.

In the second place it should be stated that the industry averages given in the table are based on all of the occupations listed in the several industries and not on those to which limitations of space made it necessary to confine the detailed tables already presented. The total number of selected occupations used in computing the industry relative was 14 in the hosiery and underwear industry and 11 in the silk industry.

Furthermore, no attempt has been made to base the relatives on data from identical establishments. With the changes that the lapse of time since the last investigation has brought about in the different establishments, the plan of confining the comparison to data from identical establishments would have two disadvantages. It would in some cases seriously limit the numbers on which the comparative figures are based; in other cases it might give undue weight to changes in hours and earnings taking place in one or another of the limited number of establishments covered when those changes did not reflect conditions in the industry as a whole. The present rela-

tives are based on the entire body of information available for each year for which a relative is shown.

Finally the effect of bonuses and of extra pay for overtime in increasing hourly earnings has been carefully noted and every effort has been put forth to make the full-time weekly earnings represent exactly what the employees would earn by working the full-time hours of the occupation and no more. For that purpose not only has the extra pay for overtime been eliminated but also every bonus which it required overtime work to secure. On the other hand attendance bonuses and others which could be earned in regular time have been included in the hourly rates from which full-time earnings were computed.

TABLE 5.—RELATIVE FULL-TIME HOURS PER WEEK, EARNINGS PER HOUR, AND FULL-TIME WEEKLY EARNINGS, 1913, 1914, AND 1919, IN THE HOSIERY AND UNDERWEAR AND SILK INDUSTRIES, BY OCCUPATION, SEX, AND YEAR.

[1913=100.]

Hosiery and underwear.

Occupation, sex, and year.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time weekly earnings.	Occupation, sex, and year.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time weekly earnings.
Cutters, male:				Knitters, web or tube, male:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	100	96	96	1914.....	101	92	93
1919.....	96	145	138	1919.....	95	163	157
Cutters, female:				Knitters, web or tube, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	99	101	101	1914.....	99	103	102
1919.....	92	185	170	1919.....	94	202	190
Finishers, female:				Loopers, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	100	98	97	1914.....	98	105	103
1919.....	95	152	152	1919.....	93	197	183
Inspectors, female:				Seamers, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	100	102	101	1914.....	101	100	100
1919.....	95	182	172	1919.....	95	163	153
Knitters, footers or toppers, male:				Winders, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	97	101	97	1914.....	99	99	98
1919.....	94	199	187	1919.....	96	174	165
Knitters, footers or toppers, female:				The industry:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	98	108	99	1914.....	99	103	102
1919.....	95	192	173	1919.....	94	184	172
Knitters, full-fashioned, male:							
1913.....	100	100	100				
1914.....	99	104	104				
1919.....	93	164	152				

TABLE 5.—RELATIVE FULL-TIME HOURS PER WEEK, EARNINGS PER HOUR, AND FULL-TIME WEEKLY EARNINGS, 1913, 1914, AND 1919, IN THE HOSIERY AND UNDERWEAR AND SILK INDUSTRIES, BY OCCUPATION, SEX, AND YEAR—Concluded.

Suk.

Occupation, sex, and year.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time weekly earnings.	Occupation, sex, and year.	Relative full-time hours per week.	Relative earnings per hour.	Relative full-time weekly earnings.
Laborers, male:				Quillers, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	101	103	104	1914.....	98	105	102
1919.....	93	197	189	1919.....	93	205	186
Loom fixers, male:				Reelers, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	97	103	100	1914.....	96	118	112
1919.....	92	170	157	1919.....	90	255	228
Reelers, male:				Spinners, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	97	100	97	1914.....	96	125	121
1919.....	90	210	188	1919.....	89	252	222
Spinners, male:				Twisters-in, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	97	102	99	1914.....	97	89	87
1919.....	95	292	283	1919.....	94	160	151
Twisters-in, male:				Warpers, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	97	103	100	1914.....	97	99	97
1919.....	92	169	156	1919.....	93	173	161
Warpers, male:				Weavers, broad silk, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	99	93	92	1914.....	97	95	96
1919.....	92	144	131	1919.....	93	201	186
Weavers, broad silk, male:				Weavers, ribbon, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	97	98	94	1914.....	99	99	98
1919.....	92	187	173	1919.....	91	177	162
Weavers, ribbon, male:				Winders, female:			
1913.....	100	100	100	1913.....	100	100	100
1914.....	98	101	102	1914.....	97	106	103
1919.....	91	172	158	1919.....	92	209	192
Doublers, female:				The industry:			
1913.....	100	100	100	1913.....			
1914.....	98	104	102	1914.....	100	100	100
1919.....	91	218	199	1919.....	98	100	98
Pickers, female:					92	191	177
1913.....	100	100	100				
1914.....	97	108	105				
1919.....	92	197	188				

The industrial survey covered eight industries for which the Bureau had material on hand for the calculation of industry relatives. That the increases in earnings in the industries included in this report may be compared with increases in the other six industries, the relatives of each industry are given in the following table:

TABLE 6.—RELATIVE EARNINGS PER HOUR IN EIGHT INDUSTRIES, 1913 TO 1919.
[1913=100.]

Year.	Cigars.	Clothing, men's.	Furniture.	Hosiery and underwear.	Iron and steel.	Lumber.	Mill-work.	Silk goods.
1913.....	100	100	100	100	100	100	100	100
1914.....	(¹)	(¹)	(¹)	103	103	(¹)	(¹)	100
1915.....	(¹)	(¹)	103	(¹)	101	91	99	(¹)
1916.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
1917.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
1918.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
1919.....	152	171	154	184	221	194	151	191

¹ Not reported.

An examination of the table shows that the two industries under consideration received increases in earnings somewhat in excess of the average of the eight industries for which the Bureau has figures. The silk industry is third from the top of the list, and the hosiery and underwear industry fourth. The index numbers 184 for hosiery and underwear and 191 for silk are both in excess of the Bureau's index number of 175 for the cost of living in the spring of 1919 on the 1913 basis.

Changes in Union Wage Scales, 1907 to 1919.

SUMMARIZED figures concerning the changes in recent years in union wage scales, drawn from a report prepared by the Bureau of Labor Statistics, are here presented. The statements are given in the form of index numbers (percentages) in which the figures for each other year are compared with the figures for 1913; in other words, 1913 is made the base, or 100 per cent. The wage figures are as of May each year.

INDEX NUMBERS OF UNION WAGE RATES, AND HOURS OF LABOR, 1907 TO 1919.

[1913=100.]

Year.	Index numbers of—		
	Rates of wages per hour.	Full-time hours per week.	Rates of wages per full-time week.
1907.....	90	103	92
1908.....	91	102	93
1909.....	92	102	93
1910.....	94	101	95
1911.....	96	101	96
1912.....	98	100	98
1913.....	100	100	100
1914.....	102	100	102
1915.....	103	99	102
1916.....	107	99	106
1917.....	114	98	112
1918.....	133	97	130
1919.....	155	95	148

For all trades covered in the report, taken collectively, the average union rate of wages per hour in May, 1919, was 155 per cent of the average in May, 1913, that is, the average rate in 1919 was 55 per cent higher than in 1913. In 1907 the average hourly rate was but 90 per cent of what it was in 1913; thus the average hourly rate had increased between 1907 and 1919 in the ratio of 90 to 155, an increase of 65 points in the index, which number is 72 per cent of 90, making an increase of 72 per cent in the rate of wages per hour between 1907 and 1919.

The index numbers for full-time hours per week decreased gradually from 103 in 1907 to 95 in 1919. It should be borne in mind that

these figures are percentages based on the year 1913, not actual hours. Index numbers for rates of wages per week increased from 92 in 1907 to 148 in 1919, or 61 per cent.

These index numbers are based on the union minimum rates as provided in agreements with employers. In some unions quite a percentage of members are actually paid, by individual arrangement, more than the union agreements specify. The average wage received by union men, therefore, to a greater or less extent, exceeds the prevailing union rate. The business agents and secretaries furnishing the information as to wage rates to the Bureau agents frequently had only indefinite knowledge concerning the exact amount above the scale received by some members of the union.

A Rest Day in Continuous Operation Industry.

By FRED C. CROXTON, OHIO INSTITUTE FOR PUBLIC EFFICIENCY.

VARIOUS plans have been suggested whereby 24 consecutive hours of rest one day in seven, combined with the 8-hour day, may be effected in industries requiring continuous operation.

It is essential that any plan adopted should:

1. Be easily understood in order to prevent confusion on the part of foremen and workmen.
2. Provide as far as possible for regularity of change or rotation of shifts.

EDITOR'S NOTE.—Certain industries require continuous operation. The simplest plan for manning such an industry has been to employ two crews, each working 12 hours a day and 7 days a week, with 24 hours of continuous service when day and night crews change place. This satisfies the need of the industry but is a heavy burden on the man. The tendency is toward an 8-hour day and a 6-day week. There are technical difficulties, however, in applying a 6-day personnel to a 7-day industry.

In the November, 1919, MONTHLY LABOR REVIEW, page 199, there was presented a working schedule for a continuous operation industry. The following table presents a brief comparison of the provisions of the plan with those of the three plans described by Mr. Croxton in this article:

Comparison of plans.

Item.	Plan published in November Review.	Plans here submitted.		
		No. 1.	No. 2.	No. 3.
Hours per turn.....	8.....	8.....	8.....	8.....
Days per week.....	6.....	Average 6.63.....	Average 6.....	Average 6.....
Hours per week.....	48.....	Average 53.....	Average 48.....	Average 48.....
Possible working hours per year.....	2,593.....	2,766.....	2,593.....	2,593.....
Rest period.....	32 or 56 hours once in 7 days.	24 hours after 6 turns.	40 hours, average once per week, with 24, 32, 48, or 56 hours twice in 13 weeks.	40 hours, average once per week.
Full calendar day of rest.....	Once in 7 days.	Once in 19 days.	Average once in 7 days.	Average once in 7 days.
Rotation in turn worked.....	Yes.....	Yes.....	Yes.....	No.....
Rotation in rest day.....	No.....	Yes.....	Yes.....	Yes.....

3. Eliminate unnecessarily long rest period, which might tend to demoralize the working force and to reduce earnings, and also to increase the number of men required.

In the MONTHLY LABOR REVIEW for November, 1919, one plan was suggested and it may be helpful to suggest three additional plans to meet varying needs and conditions. The plans here submitted cover six working positions, but the principles involved may be applied to any number of working positions excepting that the relief men in squads not multiples of six must be assigned to work relief for more than one squad in order to secure full time.

Plan No. 1.

THIS plan is probably the simplest which can be adopted. It does not provide for a full calendar day's rest each week, but for full 24-hours rest after six consecutive turns. The information is presented both in schedule and chart form merely for the sake of clearness. The plan covers 19 persons working in three 8-hour turns in six positions.

Each of the numbers 1 to 18 represents an individual worker. The letter "A" also represents an individual worker who may be termed a relief man, although, as a matter of fact, he has opportunity to work with exactly the same regularity as the employees indicated by numbers. He is a relief worker merely in the sense of working in the positions of persons numbered 1, 2, 3, etc., when these persons are off duty.

In the first presentation the turns are indicated in the first column and in the column for each day has been entered the individual number of each person on duty. The first turn may begin at any hour that is most expedient. In the second presentation, which is in chart form, the several employees are indicated by numbers in the first column, and under each day the space has been crossed for the turn worked and left blank for the period of rest.

The plan provides for each man, except the relief man, remaining continuously in the same position. Thus, it will be noted that on Monday of the first week position No. 1 is filled by employee No. 1 in the first turn; by employee No. 7 in the second turn; and by employee No. 13 in the third turn. As a matter of fact, in many lines of work all members of the squad would be engaged in the same work without any distinction as to positions.

SCHEDULE FOR 8-HOUR TURNS WITH 24 HOURS OFF AFTER 6 DAYS, IN CONTINUOUS OPERATION INDUSTRIES.

Turn number.	Position number.	First week.						Second week.						Third week.									
		M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	
1	1.....	1	A	13	13	13	13	13	13	7	7	7	7	7	7	7	1	1	1	1	1	1	1
	2.....	2	2	A	14	14	14	14	14	8	8	8	8	8	8	8	2	2	2	2	2	2	
	3.....	3	3	3	A	15	15	15	15	9	9	9	9	9	9	9	3	3	3	3	3	3	
	4.....	4	4	4	4	A	16	16	16	10	10	10	10	10	10	10	4	4	4	4	4	4	
	5.....	5	5	5	5	5	A	17	17	17	17	17	17	17	17	17	11	11	11	11	11	11	
	6.....	6	6	6	6	6	6	A	18	18	18	18	18	18	18	18	12	12	12	12	12	12	
2	1.....	7	1	1	1	1	1	1	A	13	13	13	13	13	13	7	7	7	7	7	7	7	
	2.....	8	8	2	2	2	2	2	2	A	14	14	14	14	14	14	8	8	8	8	8	8	
	3.....	9	9	9	3	3	3	3	3	3	A	15	15	15	15	15	9	9	9	9	9	9	
	4.....	10	10	10	10	4	4	4	4	4	4	A	16	16	16	16	16	16	16	10	10	10	
	5.....	11	11	11	11	11	5	5	5	5	5	5	A	17	17	17	17	17	17	17	11	11	
	6.....	12	12	12	12	12	12	6	6	6	6	6	6	A	18	18	18	18	18	18	12	12	
3	1.....	13	7	7	7	7	7	7	1	1	1	1	1	1	A	13	13	13	13	13	13	13	
	2.....	14	14	8	8	8	8	8	2	2	2	2	2	2	2	A	14	14	14	14	14	14	
	3.....	15	15	15	9	9	9	9	3	3	3	3	3	3	3	3	A	15	15	15	15	15	
	4.....	16	16	16	16	10	10	10	10	10	10	4	4	4	4	4	4	A	16	16	16	16	
	5.....	17	17	17	17	17	11	11	11	11	11	11	5	5	5	5	5	5	A	17	17	17	
	6.....	18	18	18	18	18	18	12	12	12	12	12	12	12	12	12	6	6	6	6	A	18	

Each man, including the relief worker, works 8 consecutive hours and is off 16 consecutive hours in each 24-hour day. After 6 consecutive turns of work each man, including the relief worker, has 24 hours off. Each man, including the relief worker, after he gets a 24-hour instead of a 16-hour rest period, starts work on the shift beginning eight hours later than the one on which he worked immediately preceding the rest period. Thus, employee No. 1 who works the first turn on the first Monday gets 24 hours of rest immediately thereafter, and then takes the second turn on Tuesday.

A complete rotation in turns is made in 19 days; the 20th day (Saturday of the third week) has been included in both schedule and chart merely to show that it exactly duplicates the first Monday. Seven periods of 19 calendar days (133 calendar days) elapse before the employees get back to the same schedule of turn and day per week: for example, until employee No. 1 again gets his 24-hour rest period following the first turn on Monday.

Working full time on the basis of 8 hours per day and 7 days per week, each worker could work 2,920 hours per year. Under the plan here submitted for an 8-hour day with 24 hours off after six turns, each full-time worker could work 2,766 hours per year. On a working schedule of 6 days per week and 8 hours per day, he could work 2,503 hours per year.

In large plants it may be more satisfactory to use a squad of relief men for several groups of workers instead of a single relief man for each group of six. In other words, instead of having "A" substitute for employees 1 to 18 in one squad it may be more desirable to have him substitute for employees 1, 7, and 13 in six different squads.

CHART FOR 8-HOUR TURNS WITH 24 HOURS OFF AFTER 6 DAYS, IN CONTINUOUS
OPERATION INDUSTRIES

EM- PLOY EE No.	FIRST WEEK						SECOND WEEK						THIRD WEEK								
	MON- DAY TURNS	TUES- DAY TURNS	WEDNES- DAY TURNS	THURS- DAY TURNS	FRI- DAY TURNS	SATUR- DAY TURNS	SUN- DAY TURNS	MON- DAY TURNS	TUES- DAY TURNS	WEDNES- DAY TURNS	THURS- DAY TURNS	FRI- DAY TURNS	SATUR- DAY TURNS	SUN- DAY TURNS	MON- DAY TURNS	TUES- DAY TURNS	WEDNES- DAY TURNS	THURS- DAY TURNS	FRI- DAY TURNS	SATUR- DAY TURNS	
	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	
1		X																			
2		X																			
3		X																			
4		X																			
5		X																			
6		X																			
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					
18																					
A																					

Such a plan has some advantages. The schedule which follows suggests the method.

SCHEDULE FOR 8-HOUR TURNS WITH 24 HOURS OFF AFTER 6 DAYS, IN CONTINUOUS-OPERATION INDUSTRIES, ILLUSTRATING USE OF RELIEF SQUADS WITH NO SHIFT IN POSITION FOR RELIEF WORKERS.

Turn No.	Position No.	First week.							Second week.							Third week.						
		M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.
1	1.....	1	1	1	1	1	1	A	13	13	13	13	13	13	7	7	7	7	7	1	..	..
	2.....	2	2	2	2	2	2	B	14	14	14	14	14	14	8	8	8	8	8	2	..	..
	3.....	3	3	3	3	3	3	C	15	15	15	15	15	15	9	9	9	9	9	3	..	..
	4.....	4	4	4	4	4	4	D	16	16	16	16	16	16	10	10	10	10	10	4	..	..
	5.....	5	5	5	5	5	5	E	17	17	17	17	17	17	11	11	11	11	11	5	..	..
	6.....	6	6	6	6	6	6	F	18	18	18	18	18	18	12	12	12	12	12	6	..	..
2	1.....	7	7	7	7	7	7	1	1	1	1	1	1	A	13	13	13	13	13	7	..	..
	2.....	8	8	8	8	8	8	2	2	2	2	2	2	B	14	14	14	14	14	8	..	..
	3.....	9	9	9	9	9	9	3	3	3	3	3	3	C	15	15	15	15	15	9	..	..
	4.....	10	10	10	10	10	10	4	4	4	4	4	4	D	16	16	16	16	16	10	..	..
	5.....	11	11	11	11	11	11	5	5	5	5	5	5	E	17	17	17	17	17	11	..	..
	6.....	12	12	12	12	12	12	6	6	6	6	6	6	F	18	18	18	18	18	12	..	..
3	1.....	13	13	13	13	13	13	7	7	7	7	7	7	1	1	1	1	1	A	13	..	..
	2.....	14	14	14	14	14	14	8	8	8	8	8	8	2	2	2	2	2	B	14	..	..
	3.....	15	15	15	15	15	15	9	9	9	9	9	9	3	3	3	3	3	C	15	..	..
	4.....	16	16	16	16	16	16	10	10	10	10	10	10	4	4	4	4	4	D	16	..	..
	5.....	17	17	17	17	17	17	11	11	11	11	11	11	5	5	5	5	5	E	17	..	..
	6.....	18	18	18	18	18	18	12	12	12	12	12	12	6	6	6	6	6	F	18	..	..

Plan No. 2.

THE Bureau of Labor Statistics has referred to the writer a letter just received from a very large corporation, stating that they have "entered into a definite agreement giving to its * * * shift employees a 48-hour week without reduction of earnings," and asking for "any information as to a practical shift schedule, providing *rotation in turns and rotation of the day of rest with an average of 48 hours per week.*"

In an effort to meet the needs of this corporation the schedule presented on page 124 has been drafted.

Each of the numbers 1 to 18 represents an individual worker. The letters A, B, and C represent what may be termed "regular relief workers," and the letters D, E, and F what may be termed "extra relief workers." In a period of 13 weeks a complete rotation of the day of rest is made for each regular worker and each "regular relief worker," and the average number of hours per week is 48 for the regular workers. The three regular relief workers have had only 72 days each in the 13 weeks and the three extra relief workers have had 6 days each. In large establishments, however, the three extra relief workers can be eliminated and the three regular relief workers can be given full 78 days in 13 weeks by starting the squads of 6 (18 for three turns) at different times, so that one of the two consecutive rest

days for the regular relief workers on one squad can fall at the time when extra relief workers are needed on another squad.

The time off duty at the rest period is 40 hours, excepting when the turn is shifted as follows:

During the sixth and seventh weeks—

Nos. 1 to 6 in shifting from the first to the third turn get a rest period of 56 hours.

Nos. 7 to 12 in shifting from the second to the first turn get a rest period of 32 hours.

Nos. 13 to 18 in shifting from the third to the second turn get a rest period of 32 hours.

During the thirteenth week—

Nos. 1 to 6 in shifting from third to first get 24 hours.

Nos. 7 to 12 in shifting from first to second get 48 hours.

Nos. 13 to 18 in shifting from second to third get 48 hours.

In order to give each regular man a chance to work on each of the three turns the schedule must be continued to cover 26 weeks. The principle involved, however, is exactly the same as for the 13-week period, except that at the next turn rotation (the third in the 26-week period) Nos. 1 to 6 are shifted from turn No. I to turn No. II with a 24-hour rest period and shifted back in the twenty-sixth week with a 56-hour rest period. In the same way Nos. 7 to 12 are shifted from turn No. II to turn No. III with a 24-hour rest period and back again with a 56-hour rest period, and Nos. 13 to 18 are shifted from turn No. III to turn No. I with a 24-hour rest period and back again with a 56-hour rest period.¹ The schedule follows:

¹ EDITOR'S NOTE.—While this change provides work on each turn it does not give the same number of days on each turn. By continuing the period to 39 weeks and shifting turns in the thirteenth, twenty-sixth, and thirty-ninth weeks, the same number of days on each turn may be obtained for the regular men.

SCHEDULE PROVIDING ROTATION IN TURNS AND ROTATION OF THE DAY OF REST, WITH AN AVERAGE OF FORTY-EIGHT HOURS PER WEEK.

Turn number.	Position number.	First week.	Second week.	Third week.	Fourth week.	Fifth week.	Sixth week.	Seventh week.
		M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.
I	1.	1 A 1 1 1 1 1	A 1 1 1 1 1 A	1 1 1 1 1 A	1 1 1 1 1 A	1 1 1 1 1 A	1 B 7 7 7 7	7 7 7 B 7 7
	2.	2 A 2 2 2 2 2	2 A 2 2 2 2 2	1 A 2 2 2 2 2	2 A 2 2 2 2 2	2 A 2 2 2 2 2	2 B 8 8 8 8	8 8 8 B 8 8
	3.	3 A 3 3 3 3 3	3 A 3 3 3 3 3	3 A 3 3 3 3 3	3 A 3 3 3 3 3	3 A 3 3 3 3 3	3 B 9 9 9 9	9 9 9 B 9 9
	4.	4 A 4 4 4 4 4	4 A 4 4 4 4 4	4 A 4 4 4 4 4	4 A 4 4 4 4 4	4 A 4 4 4 4 4	4 B 10 10 10 10	10 10 10 B 10
	5.	5 A 5 5 5 5 A	5 A 5 5 5 A 5	5 A 5 5 5 A 5	5 A 5 5 5 A 5	5 A 5 5 5 A 5	5 B 11 11 11 11	11 11 11 B 11
	6.	6 A 6 6 6 6 A	6 A 6 6 6 A 6	6 A 6 6 6 A 6	6 A 6 6 6 A 6	6 A 6 6 6 A 6	6 B 12 12 12 12	12 12 12 B 12
II	1.	7 B 7 7 7 7 7	B 7 7 7 7 7 B	7 7 7 7 7 B	7 7 7 7 7 B	7 7 7 7 7 B	7 C 13 13 13 13	13 13 13 C 13
	2.	8 B 8 8 8 8 8	8 B 8 8 8 8 8	8 B 8 8 8 8 8	8 B 8 8 8 8 8	8 B 8 8 8 8 8	8 C 14 14 14 14	14 14 14 C 14
	3.	9 B 9 9 9 9 9	9 B 9 9 9 9 9	9 B 9 9 9 9 9	9 B 9 9 9 9 9	9 B 9 9 9 9 9	9 C 15 15 15 15	15 15 15 C 15
	4.	10 B 10 10 10 10	10 B 10 10 10 10	10 B 10 10 10 10	10 B 10 10 10 10	10 B 10 10 10 10	10 C 16 16 16 16	16 16 16 C 16
	5.	11 B 11 11 11 B	11 B 11 11 B 11	11 B 11 11 B 11	11 B 11 11 B 11	11 B 11 11 B 11	11 C 17 17 17 17	17 17 17 C 17
	6.	12 B 12 12 12 E	12 B 12 12 E 12	12 B 12 12 E 12	12 B 12 12 E 12	12 B 12 12 E 12	12 C 18 18 18 18	18 18 18 C 18
III	1.	13 C 13 13 13 13	C 13 13 13 13 C	13 13 13 13 C	13 13 13 13 C	13 13 13 13 C	13 A 1 1 1 1	1 1 1 A 1 1
	2.	14 C 14 14 14 14	14 C 14 14 14 14	14 C 14 14 14 14	14 C 14 14 14 14	14 C 14 14 14 14	14 A 2 2 2 2	2 2 2 A 2 2
	3.	15 C 15 15 15 15	15 C 15 15 15 15	15 C 15 15 15 15	15 C 15 15 15 15	15 C 15 15 15 15	15 A 3 3 3 3	3 3 3 A 3 3
	4.	16 C 16 16 16 16	16 C 16 16 16 16	16 C 16 16 16 16	16 C 16 16 16 16	16 C 16 16 16 16	16 A 4 4 4 4	4 4 4 A 4 4
	5.	17 C 17 17 17 C	17 C 17 17 C 17	17 C 17 17 C 17	17 C 17 17 C 17	17 C 17 17 C 17	17 A 5 5 5 5	5 5 5 A 5 5
	6.	18 C 18 18 18 F	18 C 18 18 F 18	18 C 18 18 F 18	18 C 18 18 F 18	18 C 18 18 F 18	18 A 6 6 6 6	6 6 6 A 6 6
I	1.	7 7 7 B 7 7	7 7 7 7 B 7	7 7 7 7 B 7	7 7 7 7 B 7	7 7 7 7 B 7	7 A 1 1 1 1	1 1 1 A 1 1
	2.	8 8 8 B 8 8	8 8 8 8 B 8	8 8 8 8 B 8	8 8 8 8 B 8	8 8 8 8 B 8	8 A 2 2 2 2	2 2 2 A 2 2
	3.	9 9 9 B 9 9	9 9 9 9 B 9	9 9 9 9 B 9	9 9 9 9 B 9	9 9 9 9 B 9	9 A 3 3 3 3	3 3 3 A 3 3
	4.	10 10 10 B 10 10	10 B 10 10 10 10	10 B 10 10 10 10	10 B 10 10 10 10	10 B 10 10 10 10	10 A 4 4 4 4	4 4 4 A 4 4
	5.	11 B 11 11 11 11	11 B 11 11 11 11	11 B 11 11 11 11	11 B 11 11 11 11	11 B 11 11 11 11	11 A 5 5 5 5	5 5 5 A 5 5
	6.	12 B 12 12 12 12	12 B 12 12 12 12	12 B 12 12 12 12	12 B 12 12 12 12	12 B 12 12 12 12	12 A 6 6 6 6	6 6 6 A 6 6
II	1.	13 13 13 C 13 13	13 13 13 13 C	13 13 13 13 C	13 13 13 13 C	13 13 13 13 C	13 B 7 7 7 7	7 7 7 B 7 7
	2.	14 14 14 C 14 14	14 14 14 14 C	14 14 14 14 C	14 14 14 14 C	14 14 14 14 C	14 A 8 8 8 8	8 8 8 A 8 8
	3.	15 15 15 C 15 15	15 15 15 15 C	15 15 15 15 C	15 15 15 15 C	15 15 15 15 C	15 B 9 9 9 9	9 9 9 B 9 9
	4.	16 16 16 C 16 16	16 16 16 16 C	16 16 16 16 C	16 16 16 16 C	16 16 16 16 C	16 A 10 10 10	10 10 10 A 10
	5.	17 C 17 17 17 17	17 C 17 17 17 17	17 C 17 17 17 17	17 C 17 17 17 17	17 C 17 17 17 17	17 B 11 11 11 11	11 11 11 B 11
	6.	18 C 18 18 18 18	18 C 18 18 18 18	18 C 18 18 18 18	18 C 18 18 18 18	18 C 18 18 18 18	18 A 12 12 12 12	12 12 12 A 12
III	1.	1 1 1 A 1 1	1 1 1 1 A 1	1 1 1 1 A 1	1 1 1 1 A 1	1 1 1 1 A 1	1 C 13 13 13 13	13 13 13 C 13
	2.	2 2 2 A 2 2	2 2 2 2 A 2	2 2 2 2 A 2	2 2 2 2 A 2	2 2 2 2 A 2	2 C 14 14 14 14	14 14 14 C 14
	3.	3 3 3 A 3 3	3 3 3 3 A 3	3 3 3 3 A 3	3 3 3 3 A 3	3 3 3 3 A 3	3 C 15 15 15 15	15 15 15 C 15
	4.	4 4 4 A 4 4	4 4 4 4 A 4	4 4 4 4 A 4	4 4 4 4 A 4	4 4 4 4 A 4	4 C 16 16 16 16	16 16 16 C 16
	5.	5 A 5 5 5 5	5 A 5 5 5 5	5 A 5 5 5 5	5 A 5 5 5 5	5 A 5 5 5 5	5 C 17 17 17 17	17 17 17 C 17
	6.	6 A 6 6 6 6	6 A 6 6 6 6	6 A 6 6 6 6	6 A 6 6 6 6	6 A 6 6 6 6	6 C 18 18 18 18	18 18 18 C 18

From the schedule it will be noted that during the early weeks of the 13-week period the day of rest comes after five consecutive turns and during the later weeks after seven consecutive turns. In one calendar week there are two days of rest and in one calendar week no day of rest for each of the regular workers excepting the three filling position No. 6 (employees Nos. 6, 12, and 18).

The day of rest for each of the regular workers and for each of the three regular relief workers makes a complete rotation as shown in the following table:

DAY OF WEEK UPON WHICH DAY OF REST FALLS.

Week of period.	Designation of worker.						
	Numbers 1, 7, and 13.	Numbers 2, 8, and 14.	Numbers 3, 9, and 15.	Numbers 4, 10, and 16.	Numbers 5, 11, and 17.	Numbers 6, 12, and 18.	Numbers A, B, and C.
First.....	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday (Sunday
Second....	Monday (Sunday	Tuesday	Wednesday	Thursday	Friday	Saturday	Saturday
Third.....	Saturday	Monday (Sunday	Tuesday	Wednesday	Thursday	Friday	Friday
Fourth....	Friday	Saturday	Monday (Sunday	Tuesday	Wednesday	Thursday	Thursday
Fifth.....	Thursday	Friday	Saturday	Monday (Sunday	Tuesday	Wednesday	Wednesday
Sixth.....	Wednesday	Thursday	Friday	Saturday	Monday (Sunday	Tuesday	Tuesday
Seventh...	Thursday	Friday	Saturday	Sunday	None	Monday	Tuesday (Wednesday
Eighth....	Friday	Saturday	Sunday	None	Monday	Tuesday	Wednesday (Thursday
Ninth.....	Saturday	Sunday	None	Monday	Tuesday	Wednesday	Thursday (Friday
Tenth.....	Sunday	None	Monday	Tuesday	Wednesday	Thursday	Friday (Saturday
Eleventh..	None	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday (Sunday
Twelfth...	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Thirteenth	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday

For the regular workers the day of rest during the 13-week period falls twice on each day of the week except for Wednesday in the first column, Thursday in the second, Friday in the third, Saturday in the fourth, Sunday in the fifth, and Monday in the sixth.

If it is satisfactory to make a partial instead of a complete rotation of the day of rest the period required for rotation of the turns and the partial rotation of the day of rest can be cut down accordingly, but these two principles must be kept in mind:

1. That during a certain portion of the period the days worked between rest periods will be five in order to secure the day of rest one day earlier each succeeding week and that during the remaining portion of the period the days worked between rest periods will be seven in order to secure the day of rest one day later each succeeding week.

2. That in rotation of the turn the total hours of rest for the two rotations during the period must be 80 hours, or twice the rest period of 40 hours without rotation of turn.

If desired in large plants, a squad of relief men for several groups of workers may be used under this plan, following the general lines indicated in the paragraph preceding the second schedule under plan No. 1.

Plan No. 3.

IT IS often asserted that workers prefer to remain on the same turn rather than to rotate, and that there is also an economic loss in rotation of turns. It is not the purpose of this article to discuss the merits of such contention. The schedule which follows, however, provides for the 8-hour turn with an average of 48 hours per week and rotation of the day of rest but without rotation of the turn. The period required for rotation is 12 weeks. It is not believed that further explanation of this schedule is necessary in view of the discussions of those presented under plans Nos. 1 and 2.

SCHEDULE PROVIDING ROTATION OF THE DAY OF REST, BUT WITHOUT ROTATION IN TURNS, WITH AN AVERAGE OF FORTY-EIGHT HOURS PER WEEK.

Turn number.	Position number.	First week.	Second week.	Third week.	Fourth week.	Fifth week.	Sixth week.	Seventh week.
		M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.	M. T. W. T. F. S. S.
I	1.....	1 A 1 1 1 1 1 1	1 A 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 1 1 1 1 1 1	1 A 1 1 1 1 1	1 1 1 1 1 1 1
	2.....	2 A 2 2 2 2 2 2	2 A 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2	2 2 2 2 2 2 2
	3.....	3 A 3 3 3 3 3 3	3 A 3 3 3 3 3 3	3 3 3 3 3 3 3	3 3 3 3 3 3 3	3 3 3 3 3 3 3	3 3 3 3 3 3 3	3 3 3 3 3 3 3
	4.....	4 A 4 4 4 4 4 4	4 A 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4 4	4 4 4 4 4 4 4
	5.....	5 A 5 5 5 5 5 5	5 A 5 5 5 5 5 5	5 5 5 5 5 5 5	5 5 A 5 5 5 5	5 A 5 5 5 5 5 5	5 A 5 5 5 5 5 5	5 5 5 5 5 5 5
	6.....	6 A 6 6 6 6 6 6	6 A 6 6 6 6 6 6	6 6 6 6 6 6 6	6 6 6 6 6 6 6	6 6 6 6 6 6 6	6 D 6 6 6 6 6 6	6 A 6 6 6 6 6 6
II	1.....	7 B 7 7 7 7 7 7	7 B 7 7 7 7 7 7	7 7 7 7 7 7 7	7 7 7 7 7 7 7	7 7 7 7 7 7 7	7 7 B 7 7 7 7 7	7 7 7 7 7 7 7
	2.....	8 B 8 8 8 8 8 8	8 B 8 8 8 8 8 8	8 8 8 8 8 8 8	8 8 8 8 8 8 8	8 8 8 8 8 8 8	8 8 8 8 8 8 8	8 8 8 8 8 8 8
	3.....	9 B 9 9 9 9 9 9	9 B 9 9 9 9 9 9	9 9 9 9 9 9 9	9 B 9 9 9 9 9 9	9 9 9 9 9 9 9	9 9 9 9 9 9 9	9 9 9 9 9 9 9
	4.....	10 B 10 10 10 10 10	10 B 10 10 10 10 10	10 10 10 10 10 10	10 B 10 10 10 10 10	10 10 10 10 10 10	10 10 10 10 10 10	10 10 10 10 10 10
	5.....	11 B 11 11 11 11 11	11 B 11 11 11 11 11	11 11 11 11 11 11	11 B 11 11 11 11 11	11 B 11 11 11 11 11	11 B 11 11 11 11 11	11 11 11 11 11 11
	6.....	12 B 12 12 12 12 12	12 B 12 12 12 12 12	12 12 12 12 12 12	12 12 12 12 12 12	12 12 12 12 12 12	12 E 12 12 12 12 12	12 B 12 12 12 12 12
III	1.....	13 C 13 13 13 13 13	13 C 13 13 13 13 13	13 13 13 13 13 13	13 13 13 13 13 13	13 13 13 13 13 13	13 13 13 13 13 13	13 13 13 13 13 13
	2.....	14 C 14 14 14 14 14	14 C 14 14 14 14 14	14 14 14 14 14 14	14 C 14 14 14 14 14	14 14 14 14 14 14	14 14 14 14 14 14	14 14 14 14 14 14
	3.....	15 C 15 15 15 15 15	15 C 15 15 15 15 15	15 15 15 15 15 15	15 C 15 15 15 15 15	15 15 15 15 15 15	15 15 15 15 15 15	15 15 15 15 15 15
	4.....	16 C 16 16 16 16 16	16 C 16 16 16 16 16	16 16 16 16 16 16	16 C 16 16 16 16 16	16 C 16 16 16 16 16	16 16 16 16 16 16	16 16 16 16 16 16
	5.....	17 C 17 17 17 17 17	17 C 17 17 17 17 17	17 17 17 17 17 17	17 C 17 17 17 17 17	17 C 17 17 17 17 17	17 C 17 17 17 17 17	17 17 17 17 17 17
	6.....	18 C 18 18 18 18 18	18 C 18 18 18 18 18	18 18 18 18 18 18	18 18 18 18 18 18	18 18 18 18 18 18	18 F 18 18 18 18 18	18 C 18 18 18 18 18
I	1.....	1 2 2 2 2 A 1	1 2 2 2 2 A 1	1 1 1 1 1 A	1 1 1 1 1 A	2 A 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1
	2.....	3 3 3 3 3 A 2	3 3 3 3 3 A 2	2 2 2 2 2 A 3	2 2 2 2 2 A 3	3 3 3 3 3 A 4	2 2 2 2 2 A 3	2 2 2 2 2 A 3
	3.....	4 4 4 4 4 A 3	4 4 4 4 4 A 3	3 3 3 3 3 A 4	3 3 3 3 3 A 4	4 4 4 4 4 A 5	3 3 3 3 3 A 4	3 3 3 3 3 A 4
	4.....	5 5 5 5 5 A 4	5 5 5 5 5 A 4	4 4 4 4 4 A 5	4 4 4 4 4 A 5	5 5 5 5 5 A 6	4 4 4 4 4 A 5	4 4 4 4 4 A 5
	5.....	6 A 6 6 6 6 6	6 A 6 6 6 6 6	5 A 5 5 5 5 5	5 A 5 5 5 5 5	6 6 6 6 6 A 7	5 A 5 5 5 5 5	5 A 5 5 5 5 5
	6.....	7 7 7 7 7 B 7	7 7 7 7 7 B 7	6 6 6 6 6 A 6	6 6 6 6 6 A 6	7 7 7 7 7 B 8	6 D 6 6 6 6 6	6 A 6 6 6 6 6
II	1.....	8 8 8 8 8 B 8	8 8 8 8 8 B 8	7 7 7 7 7 B 7	7 7 7 7 7 B 7	8 8 8 8 8 B 9	7 7 B 7 7 7 7 7	7 7 7 7 7 7 7
	2.....	9 9 9 9 9 B 9	9 9 9 9 9 B 9	8 8 8 8 8 B 8	8 8 8 8 8 B 8	9 9 9 9 9 B 9	8 8 8 8 8 B 9	8 8 8 8 8 B 9
	3.....	10 10 10 10 10 B 10	10 10 10 10 10 B 10	9 9 9 9 9 B 9	9 9 9 9 9 B 9	10 10 10 10 10 B 10	9 9 9 9 9 B 9	9 9 9 9 9 B 9
	4.....	11 11 11 11 11 B 11	11 11 11 11 11 B 11	10 10 10 10 10 B 10	10 10 10 10 10 B 10	11 11 11 11 11 B 11	10 10 10 10 10 B 10	10 10 10 10 10 B 10
	5.....	12 12 12 12 12 E 12	12 12 12 12 12 E 12	11 11 11 11 11 B 11	11 11 11 11 11 B 11	12 12 12 12 12 E 12	11 11 11 11 11 B 11	11 11 11 11 11 B 11
	6.....	13 C 13 13 13 13 C 13	13 C 13 13 13 13 C 13	12 12 12 12 12 E 12	12 12 12 12 12 E 12	13 C 13 13 13 13 C 13	12 E 12 12 12 12 E 12	12 B 12 12 12 12 E 12
III	1.....	14 C 14 14 14 14 C 14	14 C 14 14 14 14 C 14	13 13 13 13 13 C 13	13 13 13 13 13 C 13	14 C 14 14 14 14 C 14	13 13 13 13 13 C 13	13 13 13 13 13 C 13
	2.....	15 15 15 15 15 C 15	15 15 15 15 15 C 15	14 14 14 14 14 C 14	14 14 14 14 14 C 14	15 15 15 15 15 C 15	14 14 14 14 14 C 14	14 14 14 14 14 C 14
	3.....	16 16 16 16 16 C 16	16 16 16 16 16 C 16	15 15 15 15 15 C 15	15 15 15 15 15 C 15	16 16 16 16 16 C 16	15 15 15 15 15 C 15	15 15 15 15 15 C 15
	4.....	17 17 17 17 17 C 17	17 17 17 17 17 C 17	16 16 16 16 16 C 16	16 16 16 16 16 C 16	17 17 17 17 17 C 17	16 16 16 16 16 C 16	16 16 16 16 16 C 16
	5.....	18 18 18 18 18 F 18	18 18 18 18 18 F 18	17 17 17 17 17 C 17	17 17 17 17 17 C 17	18 18 18 18 18 F 18	17 17 17 17 17 C 17	17 17 17 17 17 C 17
	6.....	19 19 19 19 19 S 19	19 19 19 19 19 S 19	18 18 18 18 18 F 18	18 18 18 18 18 F 18	19 19 19 19 19 S 19	18 18 18 18 18 F 18	18 18 18 18 18 F 18
I	1.....	1 2 2 2 2 A 1	1 2 2 2 2 A 1	1 1 1 1 1 A	1 1 1 1 1 A	2 A 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1
	2.....	3 3 3 3 3 A 2	3 3 3 3 3 A 2	2 2 2 2 2 A 3	2 2 2 2 2 A 3	3 3 3 3 3 A 4	2 2 2 2 2 A 3	2 2 2 2 2 A 3
	3.....	4 4 4 4 4 A 3	4 4 4 4 4 A 3	3 3 3 3 3 A 4	3 3 3 3 3 A 4	4 4 4 4 4 A 5	3 3 3 3 3 A 4	3 3 3 3 3 A 4
	4.....	5 5 5 5 5 A 4	5 5 5 5 5 A 4	4 4 4 4 4 A 5	4 4 4 4 4 A 5	5 5 5 5 5 A 6	4 4 4 4 4 A 5	4 4 4 4 4 A 5
	5.....	6 A 6 6 6 6 6	6 A 6 6 6 6 6	5 A 5 5 5 5 5	5 A 5 5 5 5 5	6 6 6 6 6 A 7	5 A 5 5 5 5 5	5 A 5 5 5 5 5
	6.....	7 7 7 7 7 B 7	7 7 7 7 7 B 7	6 6 6 6 6 A 6	6 6 6 6 6 A 6	7 7 7 7 7 B 8	6 D 6 6 6 6 6	6 A 6 6 6 6 6
II	1.....	8 8 8 8 8 B 8	8 8 8 8 8 B 8	7 7 7 7 7 B 7	7 7 7 7 7 B 7	8 8 8 8 8 B 9	7 7 B 7 7 7 7 7	7 7 7 7 7 7 7
	2.....	9 9 9 9 9 B 9	9 9 9 9 9 B 9	8 8 8 8 8 B 8	8 8 8 8 8 B 8	9 9 9 9 9 B 9	8 8 8 8 8 B 9	8 8 8 8 8 B 9
	3.....	10 10 10 10 10 B 10	10 10 10 10 10 B 10	9 9 9 9 9 B 9	9 9 9 9 9 B 9	10 10 10 10 10 B 10	9 9 9 9 9 B 9	9 9 9 9 9 B 9
	4.....	11 11 11 11 11 B 11	11 11 11 11 11 B 11	10 10 10 10 10 B 10	10 10 10 10 10 B 10	11 11 11 11 11 B 11	10 10 10 10 10 B 10	10 10 10 10 10 B 10
	5.....	12 12 12 12 12 E 12	12 12 12 12 12 E 12	11 11 11 11 11 B 11	11 11 11 11 11 B 11	12 12 12 12 12 E 12	11 11 11 11 11 B 11	11 11 11 11 11 B 11
	6.....	13 C 13 13 13 13 C 13	13 C 13 13 13 13 C 13	12 12 12 12 12 E 12	12 12 12 12 12 E 12	13 C 13 13 13 13 C 13	12 E 12 12 12 12 E 12	12 B 12 12 12 12 E 12
III	1.....	14 C 14 14 14 14 C 14	14 C 14 14 14 14 C 14	13 13 13 13 13 C 13	13 13 13 13 13 C 13	14 C 14 14 14 14 C 14	13 13 13 13 13 C 13	13 13 13 13 13 C 13
	2.....	15 15 15 15 15 C 15	15 15 15 15 15 C 15	14 14 14 14 14 C 14	14 14 14 14 14 C 14	15 15 15 15 15 C 15	14 14 14 14 14 C 14	14 14 14 14 14 C 14
	3.....	16 16 16 16 16 C 16	16 16 16 16 16 C 16	15 15 15 15 15 C 15	15 15 15 15 15 C 15	16 16 16 16 16 C 16	15 15 15 15 15 C 15	15 15 15 15 15 C 15
	4.....	17 17 17 17 17 C 17	17 17 17 17 17 C 17	16 16 16 16 16 C 16	16 16 16 16 16 C 16	17 17 17 17 17 C 17	16 16 16 16 16 C 16	16 16 16 16 16 C 16
	5.....	18 18 18 18 18 F 18	18 18 18 18 18 F 18	17 17 17 17 17 C 17	17 17 17 17 17 C 17	18 18 18 18 18 F 18	17 17 17 17 17 C 17	17 17 17 17 17 C 17
	6.....	19 19 19 19 19 S 19	19 19 19 19 19 S 19	18 18 18 18 18 F 18	18 18 18 18 18 F 18	19 19 19 19 19 S 19	18 18 18 18 18 F 18	18 18 18 18 18 F 18

Comparison of Earnings of New York State Factory Workers With Retail Prices of Food.

THE following table, taken from the Labor Market Bulletin, issued by the New York State Industrial Commission, gives a comparison of the course of average weekly earnings in the factories of the State with the course of retail food prices in the United States. The figures are index numbers, with June, 1914, as 100, and those for prices are derived from the relative prices published by the United States Bureau of Labor Statistics in the MONTHLY LABOR REVIEW.

COMPARATIVE INDEX NUMBERS OF AVERAGE WEEKLY EARNINGS IN NEW YORK STATE FACTORIES AND OF RETAIL FOOD PRICES IN THE UNITED STATES.

Month.	1914		1915		1916		1917		1918		1919	
	Average weekly earnings, New York factories.	Retail food prices in the United States.	Average weekly earnings, New York factories.	Retail food prices in the United States.	Average weekly earnings, New York factories.	Retail food prices in the United States.	Average weekly earnings, New York factories.	Retail food prices in the United States.	Average weekly earnings, New York factories.	Retail food prices in the United States.	Average weekly earnings, New York factories.	Retail food prices in the United States.
January.....			98	104	107	108	120	129	¹ 132	162	181	187
February.....			98	102	108	107	121	134	139	162	174	174
March.....			100	99	110	108	124	134	147	156	175	177
April.....			99	100	111	110	122	146	152	156	174	184
May.....			100	101	112	110	127	153	157	160	175	187
June.....	100	100	101	101	113	113	128	154	161	164	177	186
July.....	99	103	100	101	111	112	127	147	164	169	182	192
August.....	99	108	102	101	114	114	129	151	167	173	188	194
September.....	98	108	101	102	117	119	134	155	176	180	196	190
October.....	97	106	105	104	118	122	136	159	176	183	192	190
November.....	97	106	106	105	119	127	139	157	² 170	185	200	194
December.....	99	106	106	106	122	127	139	159	183	189	207	199
Average for year.....	98	105	101	102	114	115	129	148	160	170	185	188

¹ Drop in January, 1918, was due to Fuel Administrator's closing order for Jan. 18-22.

² Drop in November, 1918, was due to closing of factories on Nov. 11, Armistice Day.

Increased Wages for Workers in Engineering and Foundry Trades, Great Britain.¹

WORKERS in the engineering and foundry trades recently put forward a claim to an increase of \$3.65 per week for men and \$1.82 for workers and apprentices under 18 years of age. The arbitration court has now made its award, which gives to workers over 18 an advance of \$1.22 per full ordinary week. The increase takes effect on December 1 and will remain in force for

¹ Data from American consulate general at London, published in Commerce Reports for Dec. 9, 1919. U. S. Department of Commerce.

four months. The workers affected are those belonging to the Amalgamated Society of Engineers, the Federation of Engineering and Shipbuilding Trades, National Federation of General Workers, the National Brass Workers and Metal Mechanics, the Amalgamated Machine Engine and Iron Grinders and Glaziers' Society, the Amalgamated Molders' Union, and the General Iron Fitters' Association.

The arbitrators state that the total advances over prewar rates given under former awards amount to not less than \$6.94 a week plus 12½ per cent on earnings in the case of time workers, and to \$5.23 a week plus 10 per cent or over on piece rates, and 7½ per cent on earnings in the case of pieceworkers.

The present award continues:

It has been prominently brought before the court that industry is seriously handicapped by the uncertainty which must prevail when rates of wages are changed at short intervals. In many branches of trade employers are obliged when quoting prices to attach a condition providing for variation in the event of changes taking place in the rates of wages before the order is executed. As a result, contracts are sometimes withheld, postponed, or diverted abroad, and employment is adversely affected.

There appears to the court to be no lack of demand at the present time for the products of the various industries in which the parties concerned are engaged. The state of trade, therefore, sets no limitation on production, and the court concurs in the view expressed by many prominent men who speak with authority for both employers and workmen that great need exists for increased output. Such increased output is necessary if the industry is to meet foreign competition successfully; and is a condition without which increased employment and the higher remuneration of the workers can not be achieved. Statements have been made that even with that reduction of working hours which has been made during the present year the proportionate loss of time by both time and piece workers is very great. Good timekeeping is obviously essential if a satisfactory rate of production is to be maintained.

In the view of the court, production would also be stimulated by the adoption, wherever practicable, of the system of payment by results. As already stated, the percentage increase in the cost of living, as known at the date of hearing, was practically the same as in October, 1918, when the hearing took place which resulted in the last advance of wages. The court feels obliged, however, to bear in mind that the ensuing months are winter months, and that there is a general expectation, based on what appears to the court to be substantial grounds, that considerable increases in the prices of various important articles of food and commodities in common use will take place. Since the publication of the last Labor Gazette figures the prices of meat, milk, and sugar have, in fact, been advanced by an amount which will materially affect the working-class expenditure.

The amount hereby awarded is to be taken into account in the calculation of payment for overtime and night duty, and for work on Sundays and holidays and will form part of the total earnings of time and piece workers upon which the bonuses of 12½ per cent and 7½ per cent, respectively, are to be calculated, but it is not otherwise to apply to or affect present time rates, premium bonus rates, or piecework prices, and is not to be taken into account as part of the time rates for the purpose of fixing new piecework prices or bonus rates.

Commenting on the situation, the London Daily Express refers to the recurrence of the "vicious circle," whereby increase in cost of living is followed by demands for more wages; this being given raises the price of products, results in higher living costs, and is followed automatically by further claims to greater wages. In an effort to break this circle labor leaders have suggested several plans. As given in the Express, these plans include:

Increased production in conditions whereby the workers will be completely safeguarded from any attempt at exploitation and given an adequate share in the results of the extra production.

Legislation to prevent restriction of competition among manufacturers.

Universal payment by results, with binding guaranties against the reduction of piece rates.

Release by the Government of the great stocks of foodstuffs still held, and the removal of control in order to stimulate competition.

Expropriation of war fortunes and the limitation of present profits.

Prevention of speculative and overcapitalizing operations of great industrial syndicates.

More stringent antiprofitteering action.

Regulation of wage standards in accordance with the conditions of the respective industries.

Wages and Hours of Domestic Servants in England and Bavaria.

England.¹

ACCORDING to a dispatch from the American consulate general at London, the following scale of wages and conditions prepared by the joint advisory council representing the Mistresses' Association and the domestic section of the Workers' Union, has been adopted by the Association of Employers of Domestic Workers for Birmingham and the Midland Counties:

Girls of 14 to 16 in training: Minimum of \$75.90 to \$90.50 per year.

Girls of 17: Minimum of \$105.10, rising by stages to \$158.65 for servants aged 24, including an allowance of \$12.65 for uniform.

Ordinary working hours: 6.30 a. m. to 10 p. m., with 2½ hours for meals, and 2 hours off for leisure. One-half day (3 p. m. to 10 p. m.) per week, and a similar half day alternate Sundays, with a fortnight's holiday each year.

For servants over 24: Minimum wages are to be agreed upon by mistress and maid. Long service in one situation is recommended for special recognition.

¹ Commerce Reports, Dec. 9, 1919. U. S. Department of Commerce.

Bavaria.¹

THE Republican Government of Germany having abrogated the old oppressive laws regulating domestic service and granted new rights to domestic servants, the latter's wage and working conditions have of late been newly regulated in a number of States and districts through laws, awards, and collective agreements. In Bavaria, for instance, a Government decree has proclaimed a 10-hour workday for domestic servants, leaving the arrangement of working hours to mistresses and servants.

In the Bavarian twin cities Nuremberg-Fürth, the local union of the Central Federation of Domestic Servants, conjointly with the Christian and Catholic Servants' societies and the National Federation of Female Domestic Servants, had initiated a wage movement and invited the Housewives' League to discuss with them their demands with a view of concluding a collective agreement. These discussions took up more than three months, but were without result, as the housewives steadily refused to consent to shorter working hours and better wages. A friendly settlement not being achievable, negotiations were broken off and the demobilization office at Nuremberg was requested to take the dispute under consideration and to make an award.

An award was made on June 4, 1919. The award, which was declared legally binding by the Bavarian Government, granted the demands of the domestic servants with respect to working conditions and provided a minimum wage scale. Representatives of the Central Federation of Domestic Servants, the National Federation of Female Domestic Servants, and the Housewives' League were given a hearing by the arbitration board before the award was handed down. The award applies to the Nuremberg-Fürth district only, and its principal provisions are as follows:

Service record books are to be replaced by separate discharge certificates. Notice must be given before the 15th to take effect on the first of the following month. Leaving a situation without notice is also provided for, sections 123 and 124 of the Industrial Code applying here. The municipal employment exchange is to be used. After nine months' service, eight days' leave is to be allowed. After more than one year's service, longer leave must be given. During leave servants are entitled to full wages and to compensation for board.

Hours of work must be between 6 a. m. and 8 p. m., and rest periods amounting to four hours must be included within this period, as follows: Early coffee, one-quarter hour; breakfast, one-quarter hour; dinner, one hour; tea, one-quarter hour; supper, one-half hour; and

¹ Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands. Berlin, July 26, 1919.

one and three-quarters hours' free time in the afternoon, which may be spent outside the house. On Sundays and holidays only the most necessary work shall be done. When spring cleaning is to be done, extra help must be hired, unless the mistress helps. The hours for afternoons and evenings out are arranged differently for juvenile and for adult servants. Juvenile servants must be home by 8 p. m., adults by 12 p. m. Opportunity must be given in the evenings to attend night schools, lectures, meetings, theaters, etc. Wednesday afternoon is to be free in each week, and in addition to the Sunday half day a whole free Sunday in each month must be allowed in the summer months.

Wages are fixed for beginners up to the age of 18. Domestic servants under 16 years of age are to get 18 to 24 marks,¹ and those between 16 and 18, 25 to 32 marks a month. For those over 18 the minimum monthly wages are as follows:

MINIMUM MONTHLY WAGE RATES OF ADULT DOMESTIC SERVANTS IN THE NUREM-BERG-FÜRTH DISTRICT (BAVARIA), FIXED BY ARBITRATION AWARD OF JUNE 4, 1919.

Occupation.	Monthly minimum wage.	Occupation.	Monthly minimum wage.
	Marks.		Marks.
Housemaid under 20 years of age.....	35	Chamber maid, highly qualified.....	55
Housemaid over 20 years of age.....	40	Lady's maid or nursery governess.....	60
Nursemaid.....	40	Cook, plain.....	65
Maid of all work.....	45	Cook, highly qualified.....	75
Maid of all work and cook.....	55	Housekeeper.....	85
Chamber maid.....	45		

Overtime is to be paid at the rate of 1 mark an hour. In addition to money wages, domestic servants are entitled to full board and lodging. Laundresses and charwomen are to be paid 8 marks a day for 8 hours' work, or 5 marks a day if they are furnished meals.

During the first weeks of the application of the award the housewives experienced great difficulty in adapting their households to its provisions, but the servants insisted on full observance. At the end of July, however, the mistresses had with good grace accepted the new order of things, and, as servants are scarce, were frequently offering and paying wages much higher than those fixed by the award.

¹ Owing to the unsettled condition of German exchange wage rates are quoted in this article in marks without conversion into the equivalent in American money. Normally the par value of the mark is 23.8 cents.

COOPERATION.

Joint Farmer-Labor Cooperative Congresses.¹

A JOINT farmer-labor cooperative congress will be held in Chicago, February 12-15, whose purpose will be "to give effective aid to strengthening and developing the cooperative movement in America by the establishment of a Nation-wide commission, which shall serve in a comprehensive way to coordinate and build up cooperative effort between and among producers and consumers, and to unify action in eliminating speculation and profiteering in the necessities of life, and develop, to the mutual profit and advantage of all concerned, permanent good will and understanding." It is not proposed, it is explained, to establish any new cooperative organizations, but simply to bring together existing organizations among industrial workers and farmers. The conference will endeavor to work out some system of direct distribution whereby the products of the farmers' and the growers' associations can be brought to the industrial workers in cities, and, later, the products of the workers be sent to rural districts.

At the conference will be delegates from the progressive farmers' organizations, representing some eight or nine hundred thousand farmers, from the various fruit growers' associations, the Potato Growers' Association, the National Nonpartisan League, the Public Ownership League, labor organizations, and the cooperative societies, both wholesale and retail.

The congress is the outgrowth of a similar conference, also held in Chicago, November 21 and 22.

At the November conference the "National Cooperative Manifesto" was adopted. This manifesto affirmed the belief of the conference that the present high prices are due to the "wasteful methods, speculation, and profiteering of the middlemen," and declared the remedy to be the elimination of these middlemen through cooperative organizations. The growth of cooperation in the United States was noted

¹ The data on which this article is based were obtained from the National Cooperative News (Chicago), Jan. 10, 1920, the Cooperative Herald (Fargo, N. Dak.), Dec. 19, 1919, and Mr. Warren S. Stone, grand chief of the Brotherhood of Locomotive Engineers.

and indorsement made of the efforts to establish a national wholesale society and to unify the cooperative movement along national lines. The manifesto recommended that schools for training cooperative managers and employees and for the inauguration of approved systems of accounting and auditing be established.

The conference authorized the appointment of a committee of 12, representing the farmers, organized labor, and cooperative associations, to act as a joint board in developing the cooperative movement, and to submit the manifesto to the Labor Conference held in Washington, D. C., on December 13. The committee carried out its instructions and duly submitted the manifesto. The Labor Conference, however, took no action on it, merely referring the whole matter of cooperation to the American Federation of Labor committee on cooperation. In spite of the national body's failure to act, organized labor is giving the February conference its strong support, the railroad brotherhoods being particularly active.

Consumers' Cooperation.

THAT most of the literature dealing with cooperation has led to confusion in determining the true character of the movement is asserted by Albert Sonnichsen, secretary of the Cooperative League of America, in his recent book, *Consumers' Cooperation*.¹ Because the practical experience of the movement has, until recently, been too limited for a philosophy to be formulated, writers have "invariably confused its boundaries and extended them into other fields of joint action, associating the movement with enterprises thoroughly out of sympathy with it." They have regarded the cooperative movement as having four phases: Productive, agricultural, credit, and distributive—with consumers' cooperation forming the last-named phase.

The author eliminates the first three forms—the productive enterprises for the reason that "as a movement the self-governing workshops have ceased to exist," and the agricultural associations because they are not truly cooperative. In the agricultural society the "unit of membership is not a person but a private business interest"; neither is private profit eliminated, "for the goods are sold at as big a margin above the cost of production as possible, and this margin goes into the pocket of the original seller, the farmer. True this margin is very often not more than a just return for the labor involved in the

¹ Albert Sonnichsen: *Consumers' Cooperation*. New York, 1919. 223 pp.

production of the goods, but the margin is not regulated on that basis. It is a purely speculative margin." The farmers' associations, he declares, are "an integral part of the capitalist system," and it is this very system—private profit taking—that the cooperative movement combats. The credit societies organized among the working classes are, he thinks, very closely akin to consumers' cooperation, since they are in the nature of cooperative savings banks. He points out, however, that when the regular consumers' societies begin to appear, the credit societies disappear, being taken over as part of the business operations of the consumers' societies. The credit societies are not necessarily truly cooperative in principle, inasmuch as they may be formed by a group of small tradesmen to finance just the sort of enterprises (i. e., the profit-taking ones) to which the cooperative movement is opposed.

The author therefore restricts the cooperative movement to consumers' cooperation.

Part I of the book is devoted to the history of cooperation in the various countries—England, Switzerland, France, Denmark, Germany, Italy, Russia, Belgium, and the United States.

Part II is a discussion of consumers' cooperation as a factor in the social revolution. Stating that the ultimate aims of cooperation, the realization of an international cooperative commonwealth "coequal and coextensive with the whole civilized world," are essentially revolutionary, though slow and peaceful in the methods of attainment, the author takes up such movements as socialism, syndicalism, and anarchism and shows the differences and similarities between them and cooperation.

The final chapter deals with the relation of cooperation and labor. Under labor the author includes all "whose means of livelihood are dependent on the remuneration they receive for service rendered, regardless of its social value"; the difference between worker and capitalist lies in the nature of the source of their income: the one lives by effort, the other by speculative trade.

The writer remarks upon the capitalistic aspect of the cooperative movement as shown by the fact that although the forty or fifty thousand workers employed by the English cooperative wholesale societies have, on the average, higher wages, shorter hours, and better working conditions than do workers under capitalistic management, they have, as workers, no voice in the management, and may be discharged at the will of their employer. The stand taken by the societies is that the workers in the consumers' productive plants are really in the service of the social body of which they are themselves also members, and, as members, have as much control over working conditions as they are entitled to.

In spite of this aspect, cooperation is a labor movement, and it is pointed out that in all general labor disputes the cooperative societies have allied themselves with the workers.

The People Organized as Consumers.

IN SO far as cooperation tends to eliminate private profit, it also tends to increase the numbers of the working class. Thus the transformation of all members of society into workers would be the natural result of the complete abolition of private profit as a means of subsistence.

Carrying out the cooperative program to its logical conclusion, this would mean that the entire membership of all the cooperative societies would consist of workers, organized as consumers. Thus the workers in the cooperative factories would be their own employees and, through their cooperative societies, would have full power to regulate working conditions to suit themselves. This power the workers in the wholesale societies' factories already have, but, of course, they are now only 1 per cent of the total membership, the other 99 per cent being employed outside the movement. They have, therefore, only 1 vote out of 100 in the regulation of working conditions in their factories, and if the other 99 votes are invariably cast in their favor it is only through sympathy, and not through direct interest. But as cooperative production tends to increase at a faster rate than the membership, this ratio of 1 to 100 will gradually change, with 100 to 100 as a final, though perhaps an impossible, ideal. To all practical purposes the ideal will be accomplished when the ratio is 51 to 100, and that is well within the limits of possibility. Such a situation would give the cooperative workers a majority control of their own working conditions.

For the purpose of indicating tendencies, however, I shall continue to argue from the point of view of the ideal; the possible 100 out of a 100. Here, obviously, the workers and the consumers would be completely identical. With full power to raise their own wages as workers, there would be no incentive to do so, for the cost of living would rise automatically with the standard of wages. Under a system involving production for use only, labor would get the full product of effort, and there would be no question of either high or low wages. True, a certain portion of the wealth accruing from labor might be utilized in manufacturing machinery, or building new factories, or set aside in the national treasury, for the purpose of carrying on future productions, but all this would constitute social capital and would eventually revert to labor anyhow.

Summed up, and considered in its social aspect, as a universal institution, cooperation would mean the people of the country organized as consumers, employing themselves as workers, producing their own needs on a basis of actual labor cost, for use only. Thus not only the incentive, but the means, to exploitation of labor would be entirely absent.

Cooperation would not, in the author's opinion, entirely eliminate labor disputes. "Under universal cooperation, society as a whole would dominate, and all the labor groups would be subservient to it. This would entail no injustice to labor as a whole, because all members of society would be workers, and all of the product of labor would

therefore go to labor since none would be devoted to private profit. But there would always be the possibility of dispute between one trade and another." Cooperation would, however, adjust the conflicting trade interests "as nearly as humanly possible, by making labor entirely subsidiary to the great motive behind it—consumption, the human desire to fulfill the needs and pleasures of life."

As to the destiny of the movement, the writer says: "The basis of the membership is a human being, pure and simple. Potentially, membership includes all society—it is all-inclusive. Consumers' cooperation is essentially a social movement, for the interests it represents permeate all society." He thinks, however, that cooperation, being entirely voluntary with the individual, will never become "absolutely universal." It will never wholly supplant private enterprise. While theoretically it would accomplish the complete socialization of industry, there would always be an opportunity for "the private capitalist who could, or thought he could, carry on business in competition with the socialized industry," for the inventor, and for the man with originality and individuality in creative work. Cooperation "is based on the happiness, the free will, of the individual. It desires to include no one it can not benefit. When cooperation has spread just so far as it can benefit human beings it will stop, and be perfectly content to stop." The victory of cooperation has been and will be "through its own inherent superiority."

VOCATIONAL EDUCATION.

Training and Placement of Disabled ex-Service Men in the United States.

BY THE Vocational Rehabilitation Act, approved June 27, 1918, the training of discharged disabled soldiers, sailors, and marines and their replacement in industry were made a special duty of the Federal Board for Vocational Education.

According to the provisions of the act training was to be furnished to two classes of disabled men: (1) Cases in which disability prevented a return to previous employment, necessitating preparation for an entirely new employment; (2) cases in which minor disabilities, though not preventing a return to former employment, did require what the board terms "job-improvement instruction," or instruction for the purpose of advancement in the occupation followed.

One of the conditions of eligibility for training in cases under number (1), previously cited, was that the discharged disabled man must be entitled to compensation under Article III of the War-Risk Insurance Act. The care which of necessity the War-Risk Insurance Bureau was forced to exercise in securing proofs before ruling regarding such compensation often caused considerable delay in placing men in training; even when funds were available for doing so, and finally in May, 1919, a bill, approved by the Secretary of the Treasury, who represented the War-Risk Insurance Bureau, and by the Federal Board for Vocational Education, was introduced into Congress, amending the original act in this respect and disassociating the work of vocational rehabilitation under the Federal Board and the determination of compensation by the War Risk Insurance Bureau.

Those eligible for training under the act¹ which became a law July 11, 1919, include: "Every person enlisted, enrolled, drafted, inducted, or appointed in the military or naval forces of the United States, including members of training camps authorized by law, who since April 7, 1917, has resigned or has been discharged or furloughed therefrom under honorable conditions, having a disability incurred, in-

¹ Public, No. 178, 65th Cong. (S. 4557).

creased, or aggravated while a member of such forces, or later developing a disability traceable in the opinion of the board to service with such forces, and who, in the opinion of the Federal Board for Vocational Education, is in need of vocational rehabilitation to overcome the handicap of such disability, shall be furnished by the said board, where vocational rehabilitation is feasible, such course of vocational rehabilitation as the board shall prescribe and provide."

The act also provides that every person who elects to take advantage of courses of vocational rehabilitation prescribed by the board shall be paid a monthly sum during his period of training sufficient for his support and for the maintenance of his dependents, if any. The sum so paid shall not, however, "be more than \$80 per month for a single man without dependents, or for a man with dependents \$100 per month plus the several sums prescribed as family allowances under section 204 of Article II of the War-Risk Insurance Act." The sum of \$6,000,000 was appropriated for the use of the Federal Board in carrying out the provisions of this law, and by subsequent legislation, July 18, 1919, an additional appropriation of \$8,000,000 was placed at its disposal for carrying on the work of vocational rehabilitation.

Regulations Regarding Training and Placement.

THE Federal Board, being thus given a free hand to speed up its work, adopted, soon after the passage of the act on July 11, 1919, certain regulations which experience had demonstrated as advisable in the training and placement of the men and of which the following are noteworthy:

(a) No wages earned by men in training to be taken from the men, either directly or indirectly by diminishing the amount of their support and maintenance.

(b) Men in training to be paid twice a month. Provision for making payments semimonthly has presented a large administrative problem, but has helped to relieve the financial straits of disabled men.

(c) Men finishing school training to be put in probationary employment for a period of two months on pay where necessary.

(d) Men in placement training on the job to be eligible for transfer back to school, as may be required in any case, for further institutional training with pay.

(e) Men not to be dropped from the rolls on finishing courses of instruction for a period of 60 days, until every effort has been made to secure employment for them.

(f) Men discontinuing training for any reason to be carried on the pay roll to the 15th of the month or the last of the month, in order to give the district office opportunity to make further adjustments and assign new courses of instruction.

(g) Men to be provided with proper medical care. As there are legal difficulties in the way of the War Risk Insurance Bureau as regards provision of proper medical care for men in training who are in receipt of compensation

from the bureau, and in cases of sickness or injury not traceable to service, the Federal Board has arranged to pay for medical care in all cases where it becomes necessary and where such care is not provided by the War Risk Insurance Bureau or the Public Health Service, and to arrange for adjustment of the payment of claims for this medical care by the proper responsible Government agency.¹

In carrying out its work of rehabilitation and placement the board is authorized to cooperate with public and private agencies. Very satisfactory cooperative arrangements have therefore been established with the following bodies: The Departments of Commerce, Labor, and Agriculture; the War and Navy Departments; the Public Health Service; the Surgeon General's Office, War Department; the Bureau of Medicine and Surgery, Navy Department; the War-Risk Insurance Bureau; United States Employment Service; the American Red Cross; the Council of National Defense; the National Catholic War Council; the National Manufacturers' Association; the American Federation of Labor; the United States Chamber of Commerce; the Elks' War Relief Commission; the Elks' Clubs throughout the country; the Rotary Clubs throughout the country; and with casualty insurance companies throughout the country, as well as many hundreds of others. In addition thousands of smaller agencies are rendering efficient aid in the discharge of this task.

The word "disabled" is capable of various interpretations, according to the degree of injury received. The board has therefore found it necessary to set a standard of disability for the application of its efforts. A disabled man, as at present defined by the board, is one suffering a major disability resulting in a vocational handicap of approximately 15 per cent or more.

Training and Placement.

THE rehabilitation work is divided into institutional training and placement training, some of the men requiring one kind, some another, and still others both.

In each of the 14 districts into which the country is divided for the work of vocational rehabilitation carried on by the board, there is a supervisor of training and a supervisor of placement. The supervisor of training deals exclusively with the institutional end of the work. It is his business to link up with the Federal Board such schools and colleges as will furnish the training required to men approved for institutional courses. While it is necessary for the board to use all possible existing agencies, since it is not authorized to construct buildings for its work, the task of providing for training along professional, engineering, agricultural, and commercial

¹ Vocational Summary, November, 1919, p. 134. Washington.

lines, according to a recent report,¹ has not been a difficult one, the response from the universities, colleges, and schools throughout the country having been most gratifying, and the facilities offered adequate.

On the other hand, the task of the placement supervisor, who is always selected because of actual experience in industry, has been much less simple. He must provide both placement training and placement for men who do not desire to take institutional training or who from their anxiety to get back into regular employment feel that they can not afford the time to take such training. School facilities for training along trade and industrial lines are either inadequate or unavailable for several reasons. Schools furnishing a complete industrial training are few in number, and such as do exist have been crowded with regular students, especially since the close of the war. Moreover, the range of occupations in which trade schools offer courses is limited to 15 or 20, and these are quite insufficient to meet the variety of trade training demanded by the discharged men.

It has been necessary, therefore, to make arrangements for industrial training in shops, mills, factories, and offices for men whose previous experience and present physical condition best fit them for these lines of work. While the responses from employers pledging their facilities for placement training have been equally as prompt and generous as those regarding institutional work, there are considerations which complicate arrangements of this character.

In order to make the best use of previous experience or skill the board endeavors to give every man a thorough training in a pursuit as closely related to his former occupation as his disability and other circumstances allow, and furthermore one which will restore him to his full wage-earning capacity, thus making him eligible for membership in the union of his trade if he desires to join it. Effort is also made to select places for training where the best working conditions prevail. Any interference, due to the introduction of intensive courses of placement training, with the relationship or agreements existing between employers and employees is carefully avoided.

The cooperation of the employees as well as of the employers in plants where the placement training is done is sought and already many of the labor organizations have pledged their assistance in this work. Notable among these are the railway employees of the United States whose resolution² regarding aid to disabled soldiers and sailors, adopted at Washington, September 18, 1919, follows:

Whereas many of the soldiers, sailors, and marines who served the country in the recent war with Germany, have sustained permanent injuries, by which

¹ U. S. Federal Board for Vocational Education. Third annual report. 1919. Vol. II, p. 18. Vocational rehabilitation. Washington, 1919.

² Vocational Summary, December, 1919, pp. 149. Washington.

they are handicapped in pursuing their former vocations, and in some cases prevented from engaging in any self-supporting pursuit, and

Whereas society owes to these men a debt which can neither be estimated in terms of money nor paid in measures of praise or applause, and

Whereas these disabled men would in many cases become mendicants and liabilities upon society unless rehabilitated to usefulness and economic equality with other workers, and

Whereas the Federal Government has made provisions for these men to be educated, apprenticed, and trained, free of cost to them, in the various professions, trades, and occupations according to their several circumstances, and that they and their dependents shall be maintained and subsisted at the Government's expense during such preparation for future life, and

Whereas the most suitable training for some pursuits is available only "on the job," where instruction can be given concurrently with practice, and

Whereas the Federal Board for Vocational Education has expressed as its policy that each disabled man shall be returned to as nearly his former pursuit as is compatible with his disability and most promising to his future economic success, and, that all training will be thorough and designed in each case to fit the man with the ability to earn the prevailing wage in the occupation for which he is trained, and

Whereas it has come to our attention that some of these men who have made such sacrifices for the common good of society can best profit by training in the railroad shops of the country: Therefore, be it

Resolved, That we, the representatives of the machinists, boiler makers, blacksmiths, sheet-metal workers, carmen, and electricians, employed on the railroads of the United States, pledge the full cooperation of these workers with the Federal Board for Vocational Education in carrying on this great work; and further be it

Resolved, That disabled ex-service men entitled to training under the direction of the Federal Board shall be given special consideration and privilege in pursuing courses of training in railroad shops and that apprenticeship regulations shall not operate to prevent the entrance of such worthy men into courses of special instruction in railroad shops; and further be it

Resolved, That the local committees and local representatives of these trades on the railroads will upon request meet with the local representatives of the Federal Board for the purpose of cooperation in the induction of such men into shop training; and further be it

Resolved, That the officers of the railway employees' department of the American Federation of Labor and the officers of the machinists, boiler makers, blacksmiths, sheet-metal workers, carmen, and electricians' organizations be requested to send out this plan of cooperation to all local lodges and local representatives on the railroads; and further be it

Resolved, That copies of this resolution shall be furnished to the editors of the official journals of our respective organizations with the request that same be published in the next issues thereof, and that copies of the resolution be also sent to the Director of the Federal Board and to the Private Soldiers and Sailors' Legion and the American Legion.

Officers of the railway employees' department, United States Railroad Administration and Federal Board, have arranged the following plan of cooperation which, by order of the Director General of Railroads, Mr. Walker D. Hines, became effective October 31 on all railroads under Government control.

1. Only disabled men who are trained by the Federal Board for Vocational Education are covered by this arrangement.

2. Each of these handicapped men will require special consideration in the light of their particular circumstances; every case will be taken up separately by the representatives of the Federal Board with the representatives of the shop employees and the shop management, with a view to reaching a complete understanding of its circumstances and the establishment of thorough cooperation in arranging the details of the training.

3. As these men will require a special character of training they will not be considered as apprentices, but will be admitted to shops for the purpose of such special training as their injuries or circumstances require, irrespective of the number of apprentices in the shop or on the system.

4. If for any reason there is a failure to reach a satisfactory understanding locally concerning the training of any disabled man, as herein provided for, the case will be taken up immediately with the railway employees' department and the central office of the Federal Board for Vocational Education in Washington, D. C., for adjustment.

5. Each man while in training under this arrangement will be paid at the rate of 25 cents per hour, irrespective of the amount received by him as training pay from the Federal Board for Vocational Education.

6. No man in training under this special arrangement will be permitted to work overtime or on legal holidays, nor will his course of training be governed by apprenticeship regulations, but otherwise he will be required to observe the rules and regulations of the shop.

7. Each man at the completion of training will be as free to accept employment where he is trained as elsewhere, as circumstances may require and opportunity presents itself, but if he continues in the service as a workman he will be paid the prevailing rate from the date upon which his training is completed.

Courses Offered Disabled ex-Service Men.

THE courses pursued by disabled soldiers, sailors, and marines under the Vocational Rehabilitation Act, together with the number of men in each course, are shown in a table under date of November 22, 1919, as follows:¹

NUMBER OF MEN IN EACH COURSE OFFERED DISABLED EX-SERVICE MEN.

Prevocational training.

Course.	Number in course.	Course.	Number in course.
A. Fundamental.....	1,469	C. Corrective.....	99
English.....	351	Braille.....	54
Elementary education.....	397	Lip reading.....	36
Preparatory work.....	217	Stammering, cure for.....	9
Review work.....	4	Total of men in prevocational courses	2,923
B. Tryout cases.....	1,355		

¹ Vocational Summary, December, 1919, p. 148. Washington.

NUMBER OF MEN IN EACH COURSE OFFERED DISABLED EX-SERVICE
MEN—Continued.*Trade and industrial training.*

Course.	Number in course.	Course.	Number in course.
A. Building trades.	266	G. Railway occupations.	12
General study.	57	Locomotive driving.	2
Carpentry.	36	Car inspection.	5
Cabinetmaking.	51	Street-car motorman.	1
Concrete masonry.	29	Railroad signaling.	4
House painting.	6		
Plumbing.	62	II. Manufacturing pursuits.	29
Steam fitting.	3	Dye making.	3
Elevator installation.	1	General manufacturing.	6
Stonecutting.	5	Paper manufacture.	2
Estimating.	13	Silver plating.	1
B. Electrical trades.	735	Sugar manufacture.	1
Electrician.	593	Typewriter assembling.	1
Electrical bench work.	85	Cigar making.	5
Installation.	51	Instrument polishing and grinding.	9
Telephone and telegraph repair.	19	Model making.	1
Switchboard operation.	2		
Electrical testings and meter work.	5	I. Crafts.	218
C. Mechanical trades.	2,128	Watch making and repair.	52
(Automobiles, total 953.)		Jewelry making.	102
Auto mechanics.	651	Jewelry and watch repair.	25
Auto driving.	50	Engraving.	16
Ignition, starting, lighting.	178	Optics (lens grinding, etc.).	23
Vulcanizing and tire repair.	79		
Tractor operation and repair.	122	J. Advertising trades.	99
Farm mechanics.	111	Window trimming.	17
Motor mechanics.	66	Sign painting.	43
Power-plant operation.	13	Show-card writing.	39
Refrigeration.	13		
Stationary steam engineering.	189	K. Woodworking and wood finishing trades.	23
Steam engineering, marine.	6	Auto and wagon painting.	4
Machine-shop practice.	410	Furniture making.	11
Machinist, general course as.	142	Wood finishing.	2
Tool design.	56	Artificial limb making.	6
Millwright.	1		
Tool making.	7	L. Food preparation.	46
Machine operation.	34	Cooking.	7
D. Metal trades.	223	Candy making.	4
Forge work.	23	Baking.	28
Foundry molding.	9	Pastry cooking.	3
Sheet-metal work.	52	Meat cutting.	2
Tinsmithing.	2	Flour milling.	1
Die sinking and cutting.	4	Grain testing.	1
Boiler inspection.	8		
Boiler making.	3	M. Textile work.	95
Welding, general.	5	Cotton industry.	8
Welding, oxyacetylene.	68	Wool sorting.	1
Welding, electric.	2	Lace making.	1
Pattern making.	44	Weaving.	12
Copper working.	2	Loom fixing.	2
Cable splicing.	1	Cotton grading.	16
E. Printing trades.	132	General textile work.	55
Bookbinding.	1		
Lino-type operation and repair.	95	N. Repair work.	38
Monotype operation and repair.	7	Typewriter repair.	15
Lithography.	13	Sewing-machine repair.	2
Press operation.	12	Talking-machine repair.	1
Photo-engraving.	11	Piano tuning.	4
Typesetting.	3	Electric piano repair.	1
Printing, general course.	10	Instrument repair, general.	11
F. Garment and leather trades.	238	Cash-register repair.	1
Clothing designing and cutting.	51	Service man.	3
Cleaning, pressing, and dyeing.	8		
Tailoring.	50	O. Miscellaneous trades and occupations.	758
Millinery.	1	Barber.	35
Fur garment making.	4	Walter.	1
Harness making.	2	Steward.	9
Shoemaking and repair.	111	Mining (foremanship, etc.).	31
Edge trimming.	11	Motion-picture operation.	6
		Drafting, general.	524
		Drafting, architectural.	145
		Floral design.	1
		Upholstering.	6
		Total of men in trade and industrial training.	5,079

NUMBER OF MEN IN EACH COURSE OFFERED DISABLED EX-SERVICE
MEN—Continued.

Business and commercial training.

Course.	Number in course.	Course.	Number in course.
A. Administrative position (semiprofessional)	2,369	B. Subordinate position—Continued.	
Advertising, general.....	147	Secretarial work.....	75
Business administration.....	387	Clerical work.....	32
Banking and finance.....	99	Official appliance operation.....	2
Real estate.....	9	Postal clerk, preparation.....	3
Insurance.....	12	Civil service, preparation.....	17
Foreign trade.....	110	General commercial courses.....	1,884
Factory management.....	1	C. Commercial facilities (business aids).....	175
Store management.....	7	Telegraphy—	
Office management.....	3	Wireless.....	45
Hotel management.....	4	Commercial.....	78
Traffic management.....	23	Railway.....	3
Safety inspection.....	1	Telephony—	
Consular service, preparatory.....	3	Telephony, general.....	11
Detective work.....	3	Switchboard work.....	1
Library work.....	1	Transportation—	
Public health inspection.....	3	Navigation.....	13
Salesmanship.....	327	Railway traffic.....	5
Accountancy.....	423	Commercial freight.....	2
Auto accessories (sales).....	5	Foreign languages—	
General business course.....	804	Spanish.....	14
B. Subordinate position.....	2,295	French.....	3
Bookkeeping.....	225	Total of men in business and commercial training.....	4,839
Shorthand and typewriting.....	57		

Agricultural training.

A. General farming courses.....	2,195	C. Farm animal courses.....	349
Farm management.....	51	Animal husbandry.....	168
General agriculture.....	2,131	Poultry husbandry.....	95
Agricultural engineering.....	12	Dairying.....	(9)
County agent.....	1	Bee culture.....	7
B. Farm crop and gardening courses.....	186	Meat inspection.....	10
Agroonomy.....	24	D. Forestry.....	71
Berry culture.....	4	General forestry.....	46
Horticulture.....	78	Tree surgery.....	8
Citriculture.....	9	Lumber scaling and grading.....	17
Sugar-beet culture.....	1	E. Fisheries.....	4
Truck gardening.....	35	Fisheries, general study of.....	1
General gardening.....	4	Fish culture.....	3
Landscape gardening.....	22	Total of men in training in agricultural courses.....	2,805
Floriculture.....	8		
Seed specializing.....	1		

Professional education.

A. Scientific:		A. Scientific—Continued.	
Engineering.....	957	Machine design.....	3
Agricultural engineering.....	42	Surveying.....	21
Civil engineering.....	142	Chemistry.....	102
Chemical engineering.....	47	Assaying.....	16
Efficiency engineering.....	2	Geology.....	24
Ceramic engineering.....	2	Oil technology.....	10
Electrical engineering.....	219	Medical.....	547
Aeronautical engineering.....	4	Eye, ear, nose, and throat.....	33
Gas engineering.....	36	Dentistry.....	58
Oil engineering.....	7	Dental surgery.....	8
Structural engineering.....	36	Dental mechanics.....	36
Mechanical engineering.....	177	Medicine, general practice of.....	128
Marine engineering.....	12	Orthopedics.....	1
Mining engineering.....	48	Nursing.....	7
Textile engineering.....	2	Pediatrics.....	7
Safety engineering.....	2	Biology.....	6
Industrial engineering.....	3	Neurology.....	2
Sanitary engineering.....	1		

NUMBER OF MEN IN EACH COURSE OFFERED DISABLED EX-SERVICE
MEN—Concluded.

Professional education—Concluded.

Course.	Number in course.	Course.	Number in course.
A. Scientific—Concluded.		C. Other professional courses.....	640
Medical—Concluded.		Journalism.....	73
Osteopathy.....	9	Law.....	352
Chiropractics.....	16	Theology.....	35
Heat treatment.....	1	Domestic science.....	3
Pharmacy.....	102	General college course.....	80
Embalming and funeral management.....	57	Sociology.....	4
Bacteriology.....	17	Economics.....	8
Anatomy.....	7	Pedagogical courses—	
Surgery.....	2	Playground instructor.....	8
Surgery, abdominal.....	2	Physical training.....	7
Veterinary science.....	27	Pedagogy, general.....	68
X-ray operation.....	7	Commercial teaching.....	1
Optometry.....	9	Music teaching.....	1
Urology.....	3		
Cadaveric work.....	1	Total of men in training in professional courses.....	2,593
Chiropody.....	2		
B. Artistic.....	398	Recapitulation.	
Architecture.....	38	Prevocational training.....	2,923
Cartooning.....	23	Trade and industrial training.....	5,079
Commercial designing.....	147	Business and commercial training.....	4,329
Interior decorating.....	18	Agricultural training.....	2,805
Music, general.....	7	Professional education.....	2,533
Music, instrumental.....	46		
Music, vocal.....	15	Total.....	18,239
Dramatic art and public speaking.....	7		
Photography, general.....	74		
Photography, motion pictures.....	10		
Painting.....	11		
Sculpture.....	2		

It is apparent from this table, as the Vocational Summary points out, that the largest number of men, 27.8 per cent, is enrolled in the trade and industrial courses. The business or commercial courses hold second place with 26.5 per cent, while prevocational training, agricultural training, and professional training follow with 16 per cent, 15.4 per cent, and 14.2 per cent of the men enrolled, respectively.

Up to December 11, 1919, a total of 39,000 men, from the 14 districts, had been recommended for training; 23,000 had been approved for training, and of these 20,081 were taking courses of one kind or another. Only 2,500, however, were in placement training. From June 27, 1918, to November 29, 1919, the board had placed 3,752 without training and 118 with training. There have been in addition 13,544 self-placements. Since August, 1919, the board has placed only those whom it has trained. In a consideration of the number of placements made attention should be called to the fact that many cases require a training period of about two years and from six months to one year of practice, before placement is possible or practicable. Delays, too, are apt to occur in both training and placement. Sometimes a man who, from every indication and all available information, should be given a certain kind of training fails to show any aptitude in it and must be transferred to some other

line. It also happens that after training disabled men can not always be promptly placed because firms are not ready to assume the risk incurred in employing them.

The self-placements very frequently result from indirect assistance given by the board. In refusing to take full credit for the large number of self-placements resulting indirectly from its good offices the board is pursuing a somewhat different policy from that adopted in some of the other countries dealing with the same problem.

Recent Agreements in Building Trades.

New York City.

THE following is the text of the agreement entered into on November 20, 1919, between the Building Trades Employers' Association and the Building Trades Council of the City of New York, the latter representing 33 trade-unions. The agreement was effective on January 1, 1920.

In order to secure continuity of employment and uninterrupted production it is hereby agreed between the Building Trades Employers' Association of the City of New York and the Building Trades Council of the City of New York * * * that:

1. The working week shall consist of forty-four (44) hours.
2. The rates of wages from January 1, 1920, to December 31, 1921, inclusive, shall be as follows:

	Per day of 8 hours.
Art-glass workers.....	\$7. 00
Asbestos workers and insulators.....	8. 00
Blue-stone cutters.....	8. 00
Carpenters.....	8. 00
Dock builders, house shorers, and sheath pilers.....	7. 50
Cement masons.....	8. 00
Cement and concrete workers (laborers).....	(¹)
Composition roofers and waterproofers.....	7. 00
Composition roofers and waterproofers (foremen).....	7. 50
Electrical workers.....	8. 00
Electrical workers' helpers.....	4. 50
Elevator constructors.....	8. 00
Elevator constructors' helpers.....	6. 00
Granite cutters.....	8. 00
Hoisting engineers, by the week.....	46. 75
Hoisting engineers, by the day.....	9. 00
Hoisting engineers, running compressors, extra per week....	7. 00
Housesmiths and bridgemen, Local No. 40.....	8. 00
Housesmiths' finishers, Local No. 52.....	8. 00
Housesmiths' helpers.....	6. 00

¹ Now being adjusted.

	Per day of 8 hours.
Marble cutters and setters (April 1, 1920)-----	8. 00
Marble carvers (April 1, 1920)-----	9. 00
Marble polishers, bed rubbers and sawyers (April 1, 1920)---	7. 50
Marble cutters' helpers, riggers, crane and derrick men-----	6. 00
Mosaic and terrazzo workers-----	7. 00
Mosaic and terrazzo workers' helpers-----	(¹)
Metallic lathers-----	8. 00
Painters and decorators-----	8. 00
Plasterers-----	8. 50
Plasterers' laborers-----	6. 00
Plumbers and gas fitters-----	8. 00
Roofers and sheet-metal workers-----	8. 00
Steam and hot-water fitters-----	8. 00
Steam and hot-water fitters' helpers-----	6. 00
Tile layers-----	8. 00
Tile layers' helpers-----	6. 00
Upholsterers-----	9. 25
Wood luthers-----	8. 00

Provided, should the cost of living materially change, upon five months' notice from the Building Trades Council or the Building Trades Employers' Association given prior to January 1, 1921, the wage schedule for the calendar year 1921 shall be reopened and readjusted by the representatives of the parties hereto.

3. The existing trade agreements between the several trade associations, members of the Building Trades Employers' Association and the unions of their respective trades shall be continued upon their present terms and conditions until the expiration of this agreement, unless changed by the mutual consent of the parties thereto; except, that the working week and the wage schedule herein agreed upon shall not be changed, except as herein provided for.

4. Regular or consecutive overtime shall not be worked unless permission to do so shall have been given by a joint committee, consisting of the chairman of the board of governors of the Building Trades Employers' Association and the chairman of the Building Trades Council; provided that this shall not apply to occasional overtime made necessary by the exigencies of the work.

5. The unions as a whole or as a single union shall not order any strike against a member of the Building Trades Employers' Association, neither shall any number of union men leave the work of a member of the Building Trades Employers' Association, nor shall any member of the Building Trades Employers' Association lock out his employees; and, should any union or the members of any union violate this agreement and the violation is not discontinued within one week from the time notice of said violation is sent to the Building Trades Council, it shall not be considered a violation of this agreement or of any trade agreement if the Building Trades Employers' Association or any member or members thereof proceed to man the work with such men as can be secured, or, in case of such violation, if the Building Trades Employers' Association lock out the members of the defaulting union or declares a general cessation of work. It is further agreed that if workmen not members of the unions parties hereto are alleged to be employed on any job whereon any member or members of the Building Trades Employers' Association are doing work, it shall be brought immediately to the attention of the board of arbitration hereinafter provided

¹ Now being adjusted.

for, and if the facts are found by said board to be as alleged, it shall not be deemed a violation of this agreement, or of any trade agreement, for any member of the unions above mentioned to refuse to work on the job in question, unless such workmen are justifiably employed in the case above provided for, that is, where a union or a number of members of a union have first violated this agreement.

6. A permanent board of arbitration shall be established, said board to consist of five members of the executive committee of the board of governors of the Building Trades Employers' Association and five members of the executive committee of the Building Trades Council, to whom shall be referred all disputes that may arise relative to alleged violations of this agreement or the intent and meaning of any part thereof. The decision of said board of arbitration upon any matter submitted to it shall be final and binding upon all parties hereto; and, should said board of arbitration fail to agree after three consecutive daily meetings, said board of arbitration shall select an umpire, and each side shall make its arguments before the umpire, and his decision shall be final and binding upon all the parties hereto.

7. This agreement shall apply upon all work performed within the geographical limits of Greater New York and Long Island and in such additional territory as is included in the provisions of the existing trade agreements between the several trade associations of employers and the unions of their trades.

8. The unions parties to this agreement agree to furnish at all times sufficient men to man the work of the members of the Building Trades Employers' Association.

Norfolk, Va.

AN AGREEMENT recently made between employing contractors and members of unions with which the Norfolk Builders and Contractors' Association has contracts, created a joint arbitration board to which all disputes are referred. The agreement is given in full:¹

This agreement made this 1st day of August, 1919, between the Builders' and Contractors' Association, of Norfolk, Va., party of the first part, hereinafter called the builders' association and the ----- union, party of the second part, hereinafter called the "union."

Witnesseth: That the parties hereto hereby agree for their respective members as follows: |

1. There shall at all times be maintained a joint arbitration board to consist of the members of a board of five, hereinafter called builders' board, to be selected from year to year by the builders' association and of the members of a board of five, hereinafter called union board, to be selected from year to year by and to represent the following unions: Asbestos Workers and Pipe Coverers; Steam and Operating Engineers; Carpenters' District Council; Painters Decorators and Paper Hangers; Structural Ornamental and Reinforced Iron Workers; Electricians; Lathers; Sheet-Metal Workers.

Chairmen Preside Alternately.

The five members constituting the builders' board shall select its chairman, and the five members constituting the union board shall select its chairman. These chairmen shall be chairmen of the joint arbitration board. At the

¹ From Association General Contractor of America, Members' News Letter, Dec. 20, 1919. Chicago.

first meeting of the said joint arbitration board the chairman selected by the union board shall preside, at the next meeting of the said joint arbitration board the chairman selected by the builders' board shall preside, and so on alternately. There shall also be selected by the five members constituting the builders' board, a secretary, and there shall be selected by the five members constituting the union board, a secretary. These secretaries shall both serve as secretaries of the joint arbitration board. A quorum of said joint arbitration board shall consist of nine members, and no action shall be taken in any case unless at least six members vote in the affirmative. The said joint arbitration board shall meet at rooms to be provided by the builders' association, in the Monticello Hotel, Norfolk, Va., on the second and fourth Saturdays of each month, at 3.30 p. m., the first regular meeting to be held on the 23d day of August, 1919. Special meetings may be called at any time, to be held at said place, by either chairman of said joint arbitration board. Notice of said special meetings shall be given by either secretary by mailing same at least two days in advance of the time of the meeting. In the event of the absence from the meeting of the joint arbitration board of any member or members of the union board the chairman of the union board may appoint the secretary thereof, or a member or members of the union to take his or their place, and in case of the absence of a member or members of the builders' board the chairman of the builders' board may appoint the secretary thereof, or any member or members of the builders' board to take his or their place.

2. The builders' association agrees, for its members, that they will, beginning August 1, 1919, pay ----- to all employees employed by them and belonging to the mentioned unions, party of the second part. A day's work shall consist of eight hours' work, beginning at 8 o'clock a. m. and ending not later than 5 p. m. except on Saturdays, and a day's work on Saturday shall consist of four hours. All overtime work on Saturday afternoons and holidays shall be paid for at the rate of double time. Holidays shall be those named in the international union laws and of said union approved for this district.

Only Union Men to be Employed.

3. The builders' association for its members agrees that said members shall employ for the work covered by said union only men belonging to said union, unless said union can not furnish sufficient men to meet the demand within 48 hours from the time notice is furnished a representative of said union, in which event the members of the builders' association shall have the right to engage nonunion men until such time as the union can replace them with satisfactory union men.

4. The builders' association, for its members, agrees that it will, so far as possible, observe the by-laws and working rules approved by the international of the said union, and the union agrees, on its part, that there shall not be any strike nor tie-up on jobs of members of the builders' association except by an affirmative vote of six members of the joint arbitration board, in writing, signed by them, unless a general strike or tie-up is called by the international of said union.

Decision of Board Binding.

5. All matters pertaining to or disputes affecting the job, held by any member of the union with a member of the builders' association, shall be referred to the joint arbitration board, and no other action shall be taken thereon until the said joint arbitration board shall reach a decision with reference thereto, as

hereinabove provided, or as hereinafter provided for, and any decision so reached shall be binding upon the members of the union and the members of the builders' association.

6. In any case where six members of the joint arbitration board are unable to agree and thereby reach a decision, there shall be selected by an affirmative vote of at least six members of the said joint arbitration board a referee, to whom the said matters in dispute shall be referred, and his decision shall be binding upon all parties hereto and shall be treated and considered as the decision of the joint arbitration board.

7. The joint arbitration board shall have the right by an affirmative vote of six members thereon, at any meeting, to impose a fine of not less than \$25 and not more than \$100 on any members of the builders' association or said union for any violation of this contract, or any finding of the joint arbitration board, by either party. There shall, however, be only one fine imposed for any one act, violation, or offense, and the said fine so imposed therefor shall go to that union which may be determined by the joint arbitration board, be divided between several unions as said board may determine, and if the fine is imposed upon said union said fine shall go to that member of the association on whose job the offense was committed.

Wage Scale Fixed by Agreement.

8. Both the builders' association and the union hereby agree that the rate of wages fixed herein for the members of the union shall remain in effect for nine months from the 1st day of August, 1919, and no change be demanded unless notice is given to the joint arbitration board by either party hereto, in writing, of its intention to ask for a change 90 days prior to the 30th day of April, 1920; otherwise, shall continue and remain in force for a period of 12 months longer from the 30th day of April, 1920.

9. Any member of the builders' association shall have the right to retain men not belonging to said union, now in his employ, for a period of 90 days only from the 1st day of August, 1919, but in all events said association member shall and must unionize his men before 90 days, if possible.

10. It is understood and agreed, as far as possible, that nothing herein contained shall give the right to the union, or its members, to complain or make any dispute, or take action for a period of 90 days from date thereof, because any member of the builders' association has contracts on jobs on which nonunion men have worked, or are working; but this shall not prevent complaint, dispute, or action for any matter within his own craft. But in no case shall said union complain or bring charges against any association member for engaging or doing his work with nonunion bricklayers, plasterers, plumbers, and steam fitters for the full duration of this agreement or until such time as these unions shall make an arrangement with the builders and contractors' association with the consent of the arbitration board.

11. It is understood and agreed that this contract is made for and on behalf of the regular members of the builders' association only, and does not apply to the associate or honorary members thereof; said associate or honorary members consisting of building-material dealers, retail lumber dealers, etc., a list of which from time to time will be furnished by the builders' association to the union on request.

Creation of a German Archive for Collective Agreements.¹

SINCE the compact of November 15, 1918,² in which the central organizations of German employers and workers had agreed that in the future the working and wage conditions for all workers of both sexes should be regulated in accordance with conditions in the trade in question through collective agreements with the trade organizations of the workers, and since the people's commissioners by a decree of December 23, 1918,³ had given such collective agreements legally binding force, collective bargaining has steadily grown in importance. While hitherto collective bargaining predominated only in handicrafts establishments, now the handicrafts and large scale industries, commerce and agriculture, manual workers, and salaried employees outdo each other in concluding collective agreements, and the subjects regulated by these agreements become more and more numerous.

In view of the steadily growing extent of collective bargaining it is comprehensible that the various agreements frequently show greater diversities than would seem justified by occupational or local peculiarities. In the interest of sound social development it is, however, desirable that the stipulations of the various agreements be equalized as much as possible. This applies not only to wage rates but also to all other subjects regulated in collective agreements. Provisions that have stood the test and make for efficiency should as far as possible be incorporated in all the agreements, while provisions that are out of date and have proved impracticable should be avoided. This can, however, only be accomplished by a central office in which all collective agreements concluded in Germany are gathered and arranged for easy and ready reference for interested parties. A number of employers' and workers' organizations have to a larger or lesser extent been active in gathering such material. As commendable as such activities may be they can at the best only cover the collective agreements coming within the sphere of organization of the individual federations, and do not make superfluous a centralized collection. Such private activity of interested parties, moreover, can never render the same service as an official archive. Moreover, only such a non-partisan institution will enjoy among all social classes that measure of confidence which is required when the furnishing of reliable documentary bases for the settlement of labor disputes and the conclusion of collective agreements comes in question.

¹ Reichs-Arbeitsblatt. Berlin. Sept. 25, 1919, p. 691.

² MONTHLY LABOR REVIEW, April, 1919, pp. 158-160.

³ Idem, pp. 160-167.

In view of these considerations the bureau of labor statistics in the German statistical office, which is charged with the annual compilation of statistics on collective bargaining has established an archive for collective agreements (Tarifarchiv) which will try to gather and arrange for reference all agreements concluded in Germany at the earliest possible date after their conclusion. This archive is not to be confounded with the collection of legally binding collective agreements which is maintained by the Ministry of Labor as an adjunct of the register of collective agreements and embraces only a small number of such agreements. The archive in the bureau of labor statistics will contain not only the legally binding but the great mass of all the other collective agreements. In September, 1919, it had already collected 2,500 agreements newly concluded during that year.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in December, 1919.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in December, 1919, from representative establishments in 13 selected industries. Comparing the figures of December, 1919, with those of identical establishments for December, 1918, it appears that in 10 industries there were increases in the number of persons employed. The largest increase, 26.9 per cent, appears in automobile manufacturing. Three industries show decreases, the largest being 25.8 per cent in car building and repairing and 21.6 per cent in iron and steel.

Eleven of the 13 industries show an increase in the total amount of the pay roll for December, 1919, as compared with December, 1918, and 2 a decrease. Percentage increase of 96.4, 58.7, 48.8, and 44.9 appear in men's ready-made clothing, woolen, silk, and automobile manufacturing, respectively. A decrease of 22.8 per cent is found in car building and repairing, while iron and steel shows a decrease of 22 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN DECEMBER, 1918, AND DECEMBER, 1919.

Industry.	Establishments reporting for December, both years.	Period of pay roll.	Number on pay roll in December—		Per cent of increase (+) or decrease (—).	Amount of pay roll in December—		Per cent of increase (+) or decrease (—).
			1918	1919		1918	1919	
Automobile manufacturing.	39	1 week..	101,729	129,075	+26.9	\$2,723,901	\$3,946,728	+44.9
Boots and shoes.	60	..do.....	51,883	56,889	+ 9.6	1,099,136	1,333,753	+25.9
Car building and repairing..	56	1 month.	76,401	56,665	-25.8	4,626,656	3,569,873	-22.8
Cigar manufacturing.	54	1 week..	19,430	17,928	- 7.7	325,604	391,864	+20.3
Men's ready-made clothing.	34	..do.....	18,561	22,005	+18.6	385,006	756,195	+96.4
Cotton finishing.	18	..do.....	14,167	16,240	+14.6	289,472	409,573	+41.5
Cotton manufacturing.	50	..do.....	36,575	39,684	+ 8.5	633,296	807,724	+27.5
Hosiery and underwear.	58	..do.....	29,876	31,535	+ 5.6	473,497	592,023	+25.0
Iron and steel.	92	1 month.	182,086	142,766	-21.6	12,750,734	9,941,341	-22.0
Leather manufacturing.	33	1 week..	15,877	17,899	+12.7	372,734	457,682	+22.8
Paper making.	53	..do.....	29,363	29,867	+ 1.7	657,873	763,939	+16.1
Silk.	46	2 weeks.	15,092	17,849	+18.3	554,462	825,231	+48.8
Woolen.	49	1 week..	39,460	45,653	+15.7	746,379	1,184,265	+58.7

The table following shows the number of persons actually working on the last full day of the reported pay period in December, 1918, and December, 1919. The number of establishments reporting on

the question is small, and this fact should be taken into consideration when studying these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN DECEMBER, 1918, AND DECEMBER, 1919.

Industry.	Establishments reporting for December, both years.	Period of pay roll.	Number actually working on last full day of reported pay period in December—		Per cent of increase (+) or decrease (-).
			1918	1919	
Automobile manufacturing.....	22	1 week....	56,883	75,545	+32.8
Boots and shoes.....	25	do.....	11,929	13,810	+15.8
Car building and repairing.....	54	1 month....	64,857	50,345	-22.4
Cigar manufacturing.....	18	1 week....	4,797	5,271	+ 9.9
Men's ready-made clothing.....	6	do.....	8,997	9,592	+ 6.6
Cotton finishing.....	15	do.....	10,463	11,905	+13.8
Cotton manufacturing.....	33	do.....	24,256	26,925	+11.0
Hosiery and underwear.....	19	do.....	12,288	13,334	+ 8.5
Iron and steel.....	78	1 month....	143,628	115,482	-19.6
Leather manufacturing.....	19	1 week....	11,959	13,342	+11.6
Paper making.....	23	do.....	14,036	14,984	+ 6.8
Silk.....	23	2 weeks....	9,845	11,878	+20.7
Woolen.....	46	1 week....	32,298	39,864	+23.4

Comparative data for December, 1919, and November, 1919, appear in the following table. The figures show that in 10 industries there was an increase in the number of persons on the pay roll in December as compared with November, and in 3 a decrease. The greatest increase, 18.3 per cent, is shown in iron and steel, while a decrease of 10.2 per cent appears in men's ready-made clothing.

When comparing December, 1919, with November, 1919, 12 industries show an increase in the amount of money paid to employees and 1 shows a decrease. The most important increases, 23.7, 22.8, 20.3, and 17.9 per cent, appear in cotton manufacturing, iron and steel, cotton finishing, and woolen. Automobile manufacturing shows a decrease of 5.5 per cent.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1919.

Industry.	Establishments reporting for November and December.	Period of pay roll.	Number on pay roll in—		Per cent of increase (+) or decrease (-).	Amount of pay roll in—		Per cent of increase (+) or decrease (-).
			November, 1919.	December, 1919.		November, 1919.	December, 1919.	
Automobile manufacturing.....	41	1 week..	133,704	130,351	- 2.5	\$4,207,402	\$3,975,884	- 5.5
Boots and shoes.....	60	do.....	55,219	56,437	+ 2.2	1,248,318	1,373,683	+10.0
Car building and repairing.....	54	1 month....	52,933	54,845	+ 3.6	3,377,648	3,432,852	+ 1.6
Cigar manufacturing.....	53	1 week..	17,847	17,866	+ .1	373,379	389,264	+ 4.3
Men's ready-made clothing.....	44	do.....	25,314	22,736	-10.2	753,916	784,596	+ 4.1
Cotton finishing.....	18	do.....	15,684	16,240	+ 3.5	340,517	409,573	+20.3
Cotton manufacturing.....	49	do.....	39,099	40,669	+ 4.0	678,365	839,408	+23.7
Hosiery and underwear.....	60	do.....	30,797	31,493	+ 2.3	530,269	591,182	+11.5
Iron and steel.....	94	1 month....	127,280	150,600	+18.3	8,616,345	10,579,044	+22.8
Leather manufacturing.....	33	1 week..	17,786	17,899	+ .6	430,524	457,682	+ 6.3
Paper making.....	52	do.....	28,733	28,997	+ .9	701,995	736,698	+ 4.9
Silk.....	46	2 weeks....	17,392	17,849	+ 2.6	776,570	825,231	+ 6.3
Woolen.....	49	1 week..	47,253	45,653	- 3.4	1,004,264	1,184,265	+17.9

A comparatively small number of establishments reported as to the number of persons working on the last full day of the reported pay periods. The following table gives in comparable form the figures for November and December, 1919. The small number of establishments represented should be noted when using these figures.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS ON THE LAST FULL DAY'S OPERATION IN NOVEMBER AND DECEMBER, 1919.

Industry.	Establishments reporting for November and December.	Period of pay roll.	Number actually working on last full day of reported pay period in—		Per cent of increase (+) or decrease (—).
			November, 1919.	December, 1919.	
Automobile manufacturing.....	23	1 week....	79,359	76,491	— 3.6
Boots and shoes.....	26	...do.....	13,905	14,064	+ 1.1
Car building and repairing.....	50	$\frac{1}{2}$ month....	47,185	48,289	+ 2.3
Cigar manufacturing.....	17	1 week....	5,080	5,281	+ 4.0
Men's ready-made clothing.....	7	...do.....	12,702	9,970	—21.5
Cotton finishing.....	15	...do.....	11,497	11,905	+ 3.5
Cotton manufacturing.....	29	...do.....	23,073	23,303	+ 1.0
Hosiery and underwear.....	23	...do.....	13,794	14,161	+ 2.7
Iron and steel.....	78	$\frac{1}{2}$ month....	99,281	119,169	+20.0
Leather manufacturing.....	19	1 week....	13,170	13,342	+ 1.3
Paper making.....	24	...do.....	14,973	15,254	+ 1.9
Silk.....	30	2 weeks....	13,618	14,161	+ 4.0
Woolen.....	47	1 week....	41,466	39,988	— 3.6

Changes in Wage Rates.

IN ALL of the 13 industries there were establishments reporting wage-rate increases during the period November 15 to December 15, 1919. Of the establishments reporting, many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

Automobile manufacturing.—One plant granted an increase of 3 per cent to 12 per cent of the employees. Three per cent of the men in one concern received a 2 per cent increase. One establishment reported increases to 25 individuals but gave no further data, and another firm gave some small increases but made no other statement.

Boots and shoes.—One concern gave an increase of $16\frac{2}{3}$ per cent to $23\frac{2}{3}$ per cent of the employees. Two firms reported a 15 per cent increase affecting about $33\frac{1}{3}$ per cent of the force in one plant and the cutters and fitters, or about 32 per cent of the men, in the other. An increase of 10 per cent was granted by five establishments, affecting all of the men in one, 68 per cent of the force in another, $66\frac{2}{3}$ per cent of the employees in the third, and one-fourth of the workers in the fourth, while the fifth plant did not state the number of persons affected. In one concern $21\frac{1}{2}$ per cent of the employees received an increase of about 7 per cent. All of the outside cutters in one firm received an increase of one-half cent per pair.

Cigar manufacturing.—One establishment reported an increase of 10 per cent, affecting 78 per cent of the employees.

Men's ready-made clothing.—One establishment reported a 25 per cent increase throughout the plant. One concern gave a 20 per cent increase to 40 per cent of the employees. Eighty per cent of the employees in one firm received a 15 per cent increase. Three men in one plant were given an increase of \$6 a week and 75 per cent of the men received an increase of \$5 per week. Two establishments granted a \$5 increase, affecting all of the employees in one plant and 81 per cent of the men in the other; the second plant also gave an increase of 1 cent per piece to the remainder of the force. An increase of 10 per cent, affecting 50 per cent of the employees, was given by one concern. One plant gave an increase of 3 per cent to 6 per cent of the force.

Cotton finishing.—All of the employees in four plants received an increase of $12\frac{1}{2}$ per cent. Six concerns granted an increase of $12\frac{1}{2}$ per cent, affecting 95 per cent of the help; and one of these firms also gave a $6\frac{1}{4}$ per cent increase to 5 per cent of the force. Six per cent of the employees in one plant received an increase of 0.139 per cent. Another concern gave increases of 12 cents, 5 cents, 4 cents, and 3 cents per hour affecting the printers, 21 per cent of the females, all of the men, and 79 per cent of the females, respectively.

Cotton manufacturing.—One establishment reported an increase of 14 per cent affecting all of their employees. All of the men in 21 plants received an increase of $12\frac{1}{2}$ per cent. Three plants gave a $12\frac{1}{2}$ per cent increase but did not state the per cent of the force affected. One mill gave all of the force a 12 per cent increase. An average increase of 9 per cent, affecting all of the employees, was given by one concern.

Hosiery and underwear.—Increases ranging from 15 to 20 per cent, affecting all of the employees was given by one concern. Five plants reported an increase of $12\frac{1}{2}$ per cent to all of the force. One establishment gave a $12\frac{1}{2}$ per cent increase but did not state the number of men affected.

Iron and steel.—An increase of 10 per cent to 6 per cent of the force was given by one plant.

Leather manufacturing.—All of the men in one establishment received an increase of $12\frac{1}{2}$ per cent, and another concern gave a \$2 bonus to all full-time workers (90 per cent of the force).

Paper making.—All of the employees in one concern were given a 10 per cent increase, and about 88 per cent of the men in another plant received an increase of about 10 per cent. A 6 per cent raise, affecting 6 per cent of the employees, was reported by one establishment. Every man in one mill was advanced 50 cents per day.

Silk.—One establishment granted increases ranging from 15 to 20 per cent affecting all of the pieceworkers, and gave increases ranging from 10 to 15 per cent to all time workers. All of the employees in one firm received a $12\frac{1}{2}$ per cent increase. Four plants reported an increase of 10 per cent affecting the entire force in two mills, 66 per cent of the force in another mill, and 50 per cent of the employees in the fourth establishment. One concern gave an increase of $0.06\frac{2}{3}$ per cent to 0.087 per cent of the force and a $12\frac{1}{2}$ per cent increase to 0.101 per cent of the men. Ninety-five per cent of the workers in one concern received a 9 per cent increase and all of the force in another mill were granted an increase of $8\frac{1}{2}$ per cent. The weavers, or about 70 per cent of the employees, in one establishment were advanced 5 cents per hour.

Woolen.—Thirty establishments gave increases ranging from $12\frac{1}{2}$ to 20 per cent to their employees. An increase of $12\frac{1}{2}$ per cent, affecting all of the force, was granted by 13 firms. One plant gave a $12\frac{1}{2}$ per cent increase to 99 per cent of the men. Two concerns gave increases to all their employees, but did not state the amount of the increase, and two establishments reported increases, but made no further statement.

Provisions for Employment of ex-Service Men.

United States.

WITH the signing of the armistice and the accompanying prospect of an immediate return to the United States of the American forces, their proper placement in industry became an engrossing question. The War Department felt that some means other than the existing employment agencies which dealt with employment generally were necessary in order to secure information regarding possible vacancies.

Accordingly a scheme having for its object the proper placement of ex-service men in industry was instituted by the Service and Information Department of the War Department, and was operated from March 3 to September 20, 1919, when, upon the resignation of Col. Arthur Woods, who had the reemployment work in charge, it was transferred to the War Plans Division of the General Staff, where it is now being carried on under the direction of Maj. Gen. William G. Haan, Assistant Chief of Staff.

The importance of work of this character being done by the War Department was later emphasized when the United States Employment Service, which had endeavored to meet the situation of placing the discharged soldier as adequately as possible in conjunction with

its general work, was, through lack of funds, forced to suspend many of its activities and depend upon State and local agencies for information regarding the status of employment throughout the country.

In order to facilitate the carrying out of the scheme, the United States was divided into four districts, with Washington as a central office, and with a branch in each district as follows: Boston as a center for the New England States; New York for the Middle Eastern States; Indianapolis for the Central States; and San Francisco for the Western States. Recently the New England and Middle Eastern branches have been consolidated. No branch was established in the South, the reason given being that the South has no unemployment problem. South Carolina, for instance, reports that she has reabsorbed her 50,000 returned men and could use more.

The War Department has no employment agencies of its own in these districts, but has striven to establish cooperative arrangements with all of the soldier job-hunting agencies in each town or city. As a result the local employment offices of all kinds—War Camp Community Service, Bureaus for Returning Soldiers, Sailors, and Marines; Salvation Army, Y. M. C. A., American Red Cross, Knights of Columbus, National Catholic War Council, Boy Scouts of America, and Jewish Welfare Board—are all cooperating with the War Department in an effort to place every ex-service man in satisfactory employment.

In addition to furnishing buildings, office furniture, and paid employees, these local offices and welfare organizations have contributed generously of their funds and of their time. They also make weekly reports on the applications for work received and the placements made. The American Legion also is putting its strength behind this movement, and reports from various parts of the country show that it is rendering efficient aid in placing ex-service men.

The department keeps in touch with these local agencies, and through them with the labor situation in each district, by means of a force of traveling representatives, composed of 30 officers and 12 civilians, who travel from town to town enlisting cooperation with local agencies, supervising the work, and giving all possible assistance to ex-soldiers, especially in those places where unemployment is the greatest.

As a part of the headquarters work a special service was instituted which undertakes to furnish technical ex-service men located in Washington, or those coming to the city, with employment. The scope of this work has gradually extended to cover men and places in the various districts, so that now when a firm makes a requisition for a man having certain qualifications the office selects, from the soldiers' personnel cards, a man whose training and experience satisfy

the requirements, and he is immediately notified of the opportunity for work. In many of these instances, moreover, the office is able to certify a man from the same part of the country from which such a request comes, and thus the additional advantage is gained of placing a man near his home. On the other hand, in many cases firms are notified of available men in their vicinity.

To stimulate the interest of employers in the employment of soldiers, what is known as the Legion of Patriotic Employers was organized. Included among such employers are "merchants, manufacturers, corporations, tradesmen, city governments, farmers, professional men, banks, insurance companies, newspapers, storekeepers, railways, private individuals, and all concerns, great and small, who have put themselves down in writing with the Assistant Secretary of War as agreeing to take back every man who left them to serve in the war."

To every employer making this promise the War and Navy Departments issue a certificate signed by the Secretaries of War and Navy and bearing the seal of the United States, the American eagle, and the name of the firm. On December 15, 1919, 62,964 of these certificates had been issued to employers throughout the country.

On October 1, 1919, about 20,000 men remained unplaced. Between that date and November 1 this number was increased by 90,000 officers and men who had been discharged during that period. If past experience holds good 80 per cent of this latter number will go back to their old jobs, which leaves 38,000 still to be placed—a large problem.

Releases from the War Department for December 1, 1919, summarize the soldier employment statistics secured by the Service and Information Branch as follows: In eight representative cities of the New England district 1,642 ex-service men out of 2,708 seeking employment were placed in positions. Boston, with 1,265 men seeking work and 594 placements, represented one-half of this unemployment. Thirty-seven cities in the Eastern States reported for the same period 15,315 men applying for work and 9,513 placements, the relative number of placements having greatly decreased during November. New York City for the last week reported on had 2,318 applicants and 1,192 men placed, or about 50 per cent. In 58 cities of the Central States 12,408 ex-service men were placed out of 16,125 applying for work, leaving 3,717 unplaced, as against 4,518 in October, showing an improvement in the number of placements made in this district, though the number registering for employment was higher than in the preceding month. The Pacific Coast States reported difficulty in placing all the discharged men of that district in suitable employment. In 21 cities of that district 7,172 men registered for work during the month of November and 4,913 were placed, San Francisco showing the largest proportion of unemployment.

What Some of the States Have Been Doing.¹

INDIVIDUAL States, especially since the forced suspension of much of the work of the Federal Employment Service, have endeavored as far as possible to place in employment their own citizens who had entered the service. This was accomplished in some cases by means of State legislation, but generally through a continuance of the Federal Employment Service in conjunction with State and local employment agencies and the cooperation of the local councils of national defense and welfare organizations of all kinds.

State legislation providing for the placement of ex-service men, while confined to a limited number of States, covers a rather wide range of method, no two States making quite the same provision. A number of States, among them Illinois, Massachusetts, Minnesota, New Jersey, New York, and Pennsylvania, enacted legislation restoring ex-service men to civil-service positions or giving them preference in municipal and other public works. Connecticut, Delaware, Rhode Island, and Minnesota allow peddling without licenses. The Indiana Legislature enacted a law (S. B. 306) creating a board of seven members, known as the employment commission of Indiana, one section of which in cooperation with the Federal Board for Vocational Education is endeavoring to secure employment for ex-service men. Illinois also has a commission with wide powers for obtaining employment for soldiers. A Preference of Employment Act (chap. 253, Acts of 1919) passed by the Massachusetts Legislature gives preference to discharged soldiers and sailors "in the employment of mechanics, teamsters, and laborers in the construction of public works by the Commonwealth or by a county, city, town, or district, or by persons contracting therewith for such construction."

It has been the duty of the Missouri Soldiers' and Sailors' Employment Organization, created by legislative enactment, to assist ex-soldiers and ex-sailors to obtain employment, to interview former employers of ex-service men as to their reasons for failure to reemploy such men, and to make a public report of their investigations to the governor. The Veterans' Welfare Commission of Montana, approved March 4, 1919, in its effort to educate and place returning soldiers, may "establish employment agencies, furnish employment, provide institutions, assist the United States in reclamation or reconstruction work, make grants or loans, and expend the funds entirely in the discretion of the commission." One hundred thousand dollars was appropriated by the Oregon Legislature to finance a commission

¹ Data taken largely from information furnished by the American Red Cross, Come Back, Nov. 8, 15, 22, and 29, and from U. S. Council of National Defense, Readjustment and Reconstruction Information, Part II. Washington, D. C. (In press.)

of five members, called the soldiers' and sailors' commission, whose duty it shall be to spend this sum as it deems best in assisting honorably discharged soldiers and sailors and marines to obtain employment and in such other ways as will best promote the interests of the men, while Rhode Island appropriated \$9,550 for the maintenance of free employment offices for discharged soldiers and sailors and other unemployed in such centers as the governor selects.

As early as January 25, 1919, California appointed a State committee on soldiers' reemployment readjustment to succeed to the activities of the State council of defense. In addition to concentrating upon the placement of soldiers, accelerating the payment of allotments, controlling relief collections, and carrying out an Americanization program, the committee operating through 58 county divisions of the council of national defense has sent requests to mayors, chambers of commerce, and other organizations, asking them to form placement or readjustment committees. In addition the committee made out the quota of returning soldiers for each county so that each could know just what its obligation was. Surplus and shortage of labor were also revealed by this means and men seeking jobs were sent to places where work was available. California has in operation a successful land settlement scheme, one of the few not in some way dependent upon proposed Federal aid and giving preference to the honorably discharged soldier, sailor, or marine. North and South Dakota and Colorado also have independent land settlement schemes.

A sum of \$500,000 was appropriated by the Legislature of the State of Washington to assist ex-service men back to civil life. The fund is administered by the veterans' welfare commission, which may use it in the manner best suited to carry out the purposes of the appropriation. To this end the commission may establish employment agencies, provide for institutions, and make grants and loans. New Jersey created a nonsalaried State employment bureau to act in cooperation with the Federal Government in furnishing employment for men discharged from the service.

A number of States have provided through legislative enactment for the vocational rehabilitation and training of ex-service men, and have provided free tuition in State universities as a preparation for future employment.

What may be termed private means taken in the various States, cities, and towns throughout the country to solve ex-soldier unemployment problems are almost too numerous to mention. In many places councils of national defense took over the work of the Federal Government along this line. Welfare organizations, such as those cooperating in the War Department scheme previously outlined, have used every facility at hand to carry on this important work. Sys-

tematic canvasses of factories and business houses have been made to obtain jobs for men discharged from the forces. Governors have called on employers to reemploy all employees. Many States and cities have assisted men financially until they found employment. Citizen committees have given their services and the means to keep up existing local agencies or to create new ones. Special courses in vocational education have been offered to train men for certain lines of employment and many universities are giving free tuition.

A fine spirit is manifested in many of these local agencies. Placement is not merely a matter of furnishing a man some sort of job. An effort is being made to make each case, as far as possible, a personal matter, and from a consideration of the circumstances surrounding each case to place each man in the right job. Reports from various parts of the country, however, show that even all these agencies are not adequately meeting the situation, and that while a sincere effort has been made to meet the soldier unemployment problem, much undoubtedly still remains to be done.

Belgium.¹

THE text of a law, dated October 24, 1919, dealing with the reengagement of demobilized soldiers, appears in the *Moniteur Belge* of October 31. Among the principal provisions of this measure are the following:

Where a contract of service existed between an employer and a man called to the colors, and the period of the contract was not stated, the soldier, on his return to civil life, can demand to be reinstated in the position formerly held. Mobilization, in short, can not be considered as a reason for the breaking of a contract of service. Application for reinstatement must be made within two weeks of the man's demobilization, or, if he should be suffering from wounds or sickness, within two weeks from his recovery. For men already discharged, this period is extended to one month from the date of publication of the law.

If such reasons exist as the destruction of the works, lack of machinery, raw materials or orders, disablement of the worker, etc., the employer can not be forced to reinstate a man in the position formerly held, but if there is a similar suitable post vacant he is bound to offer this. If the hindrances to reinstatement are temporary in nature the employer is bound to reengage the ex-soldier when these are removed.

The rate of remuneration of a reinstated worker must be the normal wage currently paid to workers of the same category, and not less

¹ Data from *The Labour Gazette*, London, December, 1919, p. 517.

than the rate he was receiving before being called up for military service.

During the year following his reinstatement, a demobilized workman is entitled to three months' notice of dismissal, unless there is a recognized legal reason for breaking the contract of service, or unless a longer period is customary.

Employers may not allege, as a reason for noncompliance with the demand for reinstatement, that a contract of service has been made with a worker or workers who replaced the man when he was mobilized.

If the contract of service at the time of mobilization was for a specified period of time, then, instead of a demand for reinstatement, the man is required simply to notify his employer of his return to civil life, or of his cure within two weeks after demobilization or discharge. Where the length of the unexpired period of contract is less than three months the date of termination shall be postponed for an unspecified period, should the man so demand.

Germany.

ACCORDING to the British Labour Gazette for November, 1919 (p. 468), the order of January 9, 1919, providing that all public and private establishments, offices, and administrations should engage at least 1 disabled ex-soldier for each 100 persons employed, including officials, salaried employees, and manual workers of both sexes, has been amended by a subsequent order, dated September 24, 1919, which provides that 1 disabled ex-service man shall be engaged where the number of persons employed is 25 or over and not more than 50, and 1 in addition for each further 50.

As applying to agricultural undertakings, the original order provided that 1 disabled man was to be employed in every 50 persons engaged, and this has been repealed.

A disabled person is described as one who is in receipt of a military disablement pension amounting to 50 per cent or upward of the full pension.

Overcoming Opposition to Physical Examination of Workers.

THERE is a growing attitude of opposition among labor unions to the physical examination of industrial workers, according to Dr. C. D. Selby in an article on "Reclaiming the physical examination of industrial workers," published in *Modern Hospital*

for December¹. The author divides the problem presented by this attitude into three phases and analyzes the phases in their practical relations to the workers, the employers, and the industrial physicians. It is the latter, however, upon whom he places the responsibility for the existence of conditions which have led to this attitude as well as for readjustments which would bring about a more generally effective medical examination and supervision service, the value of which they should demonstrate to both employers and employees.

The reason for the opposition of the labor unions to physical examinations is ascribed to the rejection of applicants for employment, rejections having been the only effect of such examinations which the unions seem to have observed. Dr. Selby believes that physicians are partly responsible for this, since they have not measured up to what industry was led to expect of them in the way of fitting men to their jobs and helping them to correct physical defects. Consequently, the outstanding result has been the rejection of those who were deemed physically disqualified. "Inasmuch as physical examinations are essential to the betterment of health among working people, efforts to offset this growing antagonism would seem to be not only justified, but urgent as well; otherwise the whole movement of industrial health supervision may fall."

It is suggested that the first step in settling the problem is to satisfy the unions. This would require:

First, that the number of rejections be reduced to the minimum; and second, that means be provided for (a) the industrial rehabilitation of the essential "rejects" capable of restoration, and (b) the pensioning or institutionalizing of those who are not.

To reduce the number of rejections it is imperative that industry be induced to absorb more of the physically handicapped workers than it now does, which is difficult to accomplish. In the first place, compensation acts tend to place full responsibility upon employers for the results of injuries to such workers even though preexisting conditions may have been largely responsible. Furthermore, handicapped workers may or may not be competent, depending upon (a) the skill of physicians in interpreting their physical values, (b) the judgment of employing officers in assigning them to jobs, (c) the special facilities they are furnished for work, and (d) the quality of supervision they work under. In other words, handicapped workers require special and unusual attention and facilities in order that their labor may be used with advantage and to the profit of their employers. Few employers care to go to this effort and do not attempt to if they can maintain their working forces without.

Under existing conditions only a shortage of labor will induce the average employer to hire handicapped workers, declares the author, but he thinks that if employers could be assured of relief, in case of injury, from the whole responsibility of end results due to preexist-

¹ Reclaiming the physical examination of industrial workers, by C. D. Selby, formerly consulting hygienist, United States Public Health Service. In *Modern Hospital*, Chicago, December, 1919, pp. 528-530.

ing conditions, they would be willing to hire physically defective workmen. In order that the number of rejections be reduced, compensation acts must be "so modified as to relieve employers from at least a part of the responsibility of results of injuries that are influenced by conditions beyond their control and for which the employees themselves are responsible."

The second phase of the problem is to make it easier for employers to utilize the labor of handicapped workers to advantage and with profit. The greatest responsibility in dealing with this phase lies with the physicians, and the author thinks that, in general, physicians have, so far, fallen short of fulfilling possibilities open to them for the greatest service; that "industrial physicians recognize and believe in the theory of fitting men to their jobs, but fail in the majority of instances in its application."

Industrial physicians must demonstrate to their employers that not only handicapped workers may be competent if properly employed, but that likewise all workers will be more competent if they also are fitted into jobs they are physically adapted to.

At the present time it is doubtful if physicians are prepared to do this, for something more than a mere conception of physical values is required, and this is a knowledge, a very intimate knowledge in fact, of working conditions. Industrial doctors must be prepared to advise intelligently and convincingly on the hiring and placing of all employees whether impaired or normal, and to do so they must study each operation in their plants, classifying and codifying the physical requirements of each so that their knowledge of working conditions is instantly available.

Studies of this nature need not be of an ultra-scientific character. On the contrary a few simple observations are all that are necessary. For example, consider the physical requirements of iron molding in a fairly dusty foundry. The workman must have (1) no disease of the respiratory tract, (2) no heart or vascular disease, (3) no hernia; he must be (4) 5 feet 8 inches tall, and (5) fairly strong (as indicated by his musculature); he must have (6) good back action (for lifting), and (7) sound extremities. Then take the man in the same foundry whose business it is to weigh the castings. About the only requirement to be expected of him is that he have sufficient eyesight to read the scales. He could be ruptured, have high blood pressure, and what not—it matters little.

The third phase of the problem suggested by Dr. Selby is concerned with the physical supervision of the handicapped workers after they are placed. The men should be looked up from time to time by the physician to see what effect the work has on them. Not only does this enable physicians to advise handicapped workers if they are doing harm to themselves, but it enables them to do their own work more competently. It is suggested, in this connection, that examining physicians should be expected to spend some time each day in their plants for the purpose of observing impaired workers at their work. Such workers should be required to report for further

examination occasionally, particularly in connection with their impairment.

The writer touches on the subject of the industrial rehabilitation of essential "rejects" capable of restoration and of the pensioning or institutionalizing of those who are not, commending to students of sociology and particularly to those who are interested in the sociological phases of hospital work the problem presented by this subject. Dr. Selby's conclusions are as follows:

Two essential thoughts concerning industrial physicians have developed out of this brief study. They will be emphasized in closing. The first is that the doctors of industry must study working conditions and apply the information they gain therefrom to the practical fitting of men to their jobs. The other is that industrial physicians must, absolutely must, exercise more in the way of physical supervision after the men get on their jobs. These two measures are imperatively necessary if the physical examination is to be saved from the antagonism of labor, and as a matter of fact they are quite essential to the proper pursuit of industrial hygiene. The opposition of labor should not be required to stimulate physicians to do what is very properly their self-assigned but greatly neglected task.



Effect of Employment of Mothers Upon Sickness Among School Children.

LACK of supervision of the child owing to the mother being employed away from home is cited by Dr. G. W. N. Joseph, school medical officer of the borough of Warrington (England), as the one cause which was especially responsible for noticeable increase in the number of minor ailments and the length of time necessary for their cure among the children attending the schools of Warrington last year, according to an article in *The Medical Officer*¹ (London). Referring to Dr. Joseph's report, upon which the statement is based, the article continues:

In inquiring into the results of the employment of mothers the infantile mortality and sickness returns do not help much, because the infant is probably less affected than any other member of the family. In Warrington, at any rate, it appears that as many as 84 per cent of the women stay at home for a minimum of three months to breast feed the child from its birth. More than this, when the mother does leave home she arranges for some responsible person to look after her infant, and, if necessary, pays for this to be done. It is the older child that suffers most from this lack of attention, for the older a child is the more it has to shift for itself. In rare cases only, when the mother goes out to work, are hot meals provided at midday, and the children generally have to forage for themselves and make a meal of such things as bread and butter or jam, meat pies, fruit tarts, and cake. Adult members of the family, too, suffer

¹ Industrial employment of mothers. In *The Medical Officer*, London, Nov. 22, 1919, p. 190.

in this respect. The effect on the nutrition of the child has been marked to a large extent by the increased family income enabling a higher standard of living to be reached, but this increased income was due more often to State allowances than to the earnings of the mother.

Dr. Joseph therefore considers it is not surprising, seeing that the number of mothers employed in industry reached a maximum in 1918, that the number of children suffering from minor ailments should be larger than previously, and the time taken to cure the home treatment cases was nearly twice that of the previous year. He urges that something must be done to prevent the mother from engaging in work away from her own home if any real social progress is to be made. Definite prohibition of employment of women with children is not necessary, but our policy must be to make it easy for the mother to stay at home as opposed to the policy of making it easy for her to engage in industrial work. Dr. Joseph makes the interesting suggestion that possibly legislation is needed to secure that a mother should be entitled to a proportion of the husband's earnings to enable her to look after the home and children when she is capable and willing to do so. Undoubtedly, where the mother is a widow, deserted, or the wife of an invalid husband, the desirability of some form of mother's or, rather, child's pension requires consideration. The multiplication of institutions such as creches or day nurseries, however essential they were during the war, can not be in the best interests of the nation. As Dr. Joseph says, the basis of all public health must be to give the people healthy homes, to teach them to lead healthy lives in those homes, and to arrange that there is a sufficient income for every family to enable the mother, or, where there is no mother, some other responsible person, to remain in each home to look after the little ones.

Unemployment and Unemployment Relief in Germany and Austria.

Germany.

DEUTSCHER Reichsanzeiger,¹ the official German gazette, publishes the following data as to changes in the general level of employment and unemployment in Germany during September and October, 1919:

The premature commencement of cold weather, the ending of the harvest season, the suspension of building operations, the increased shortage of coal, transport difficulties, numerous stoppages of work, and the continued return of war prisoners and refugees from occupied territories and territories to be surrendered, have all combined to put a considerable strain on the labor market. This is shown primarily by increased unemployment.

According to returns from 32 trade-unions, covering in the aggregate 4,256,398 members, 110,626 (2.6 per cent) were out of employment at the end of October, 1919, as compared with 2.2 per cent in September of the same year and 0.7 per cent in October, 1918. Unemployment among men increased from 1.7 per cent in September to

¹ Deutscher Reichsanzeiger. Berlin, Dec. 1, 1919.

2.3 per cent in October, chiefly in consequence of the suspension of building operations and the unsuccessful strike of the Berlin Metal Workers. Among women, unemployment decreased from 4.1 per cent in September to 3.9 per cent in October, principally on account of the improvement in the textile industry.

The number of persons in receipt of unemployment relief in 97 cities dropped from 234,242 (of whom 164,544 were males and 69,698 females) on September 27, 1919, to 218,695 (158,409 males and 60,286 females) on November 1, 1919. As, however, no returns on the situation on November 1 had been received from Hamburg, Munich, and several other large cities, care must be taken in using these figures.

Returns relating to employment exchanges in October show that for every 100 vacant situations for men there were 150 applicants, as against 143 in September; in the case of women the applications numbered 115 as against 116 in September. Applications by men have therefore increased considerably since the preceding month, whereas those made by women were slightly fewer. There is a continued demand for labor in the mining industry. For every 100 vacancies there were 52 male applicants in October as compared with 40 in September. A shortage of labor was also experienced in agriculture, where, for every 100 vacancies there were 88 male applicants as compared with 81 in September, and 44 female applicants as compared with 37 in September. In commerce there was a large surplus of labor; for every 100 vacancies there were 430 male applicants (459 in September), and 287 female applicants (277 in September). Considerable improvement in the labor market of the textile industry was shown by the fact that the number of male applicants for every 100 vacancies dropped from 410 in September to 277 in October, while in the case of women the number of applicants decreased from 402 in September to 287 in October.

The *Börsen-Zeitung*¹ reports a further decrease of unemployment in Berlin during September and October, 1919. The following table shows the number of unemployed at the beginning and end of these two months.

UNEMPLOYMENT IN BERLIN, SEPTEMBER AND OCTOBER, 1919.

Item.	September, 1919.			October, 1919.		
	Men.	Wom- en.	Total	Men.	Wom- en.	Total.
Number of unemployed—						
At the beginning of the month.....	71,000	24,000	95,000	61,000	20,000	84,000
At the end of the month.....	64,000	20,000	84,000	59,000	17,000	76,000
Number placed in situations during the month.....	17,000	7,500	24,500	13,500	6,500	20,000
Number of unemployed added to register during the month.....			13,500			12,000

¹ *Börsen-Zeitung*. Berlin, Oct. 12 and Nov. 16, 1919.

The total amount paid out for unemployment relief was 12,000,000 marks¹ in September and 8,000,000 marks in October.

In Saxony the number of unemployed is decreasing almost everywhere, according to the *Münchener Neueste Nachrichten*.² Strikes have decreased in number and duration. There is a growing tendency to settle disputes by negotiation or arbitration. It is only in the metal industry that great difficulties exist. A growing sense of duty is noticeable, one proof of which is seen in the decision to work on Sundays in all lignite pits in Saxony. Even among the workers themselves, a return to piecework is supported on condition that a certain minimum wage is guaranteed. Only the workers in the railway workshops are opposed to piecework. The trade-unions do not oppose the piecework system on principle, and in many industries it has been reintroduced to the satisfaction of all concerned.

The extent of unemployment in Saxony during July, August, and September, 1919, is shown in the following table:

UNEMPLOYMENT IN SAXONY, JULY, AUGUST, AND SEPTEMBER, 1919.

Unemployed.	July.	August.	September.
Men.....	70,636	67,874	59,931
Women.....	55,652	56,989	48,272
Persons under 21.....	11,255	11,911	7,875
Total.....	137,543	136,774	116,078

The *Frankfurter Zeitung*³ reports that in September the labor market in Frankfort on the Main was favorably influenced by several circumstances, including the gardening exhibition and the preparations for the fair. The reinstatement of returned prisoners of war is proceeding smoothly on the whole without burdening the open market. According to official figures about 1,500 prisoners whose place of residence is Frankfort had returned up to the end of September. The number of persons in receipt of unemployment grants decreased by 33 per cent during September, or from 5,600 in August to 3,772 in September, 1919. Work was found for 12,085 persons through the municipal employment office, as against 10,572 in August. Agricultural workers were much in demand. Skilled workers for the metal industry and for the woodworking and building trades were also in demand and in the printing trade conditions have much improved. In commerce and industry there was a demand for young people. In the case of women, the number of industrial workers has decreased. There is a considerable demand for expe-

¹ In view of the unsettled condition of foreign exchange sums of German and Austrian money in this article are not converted into their equivalents in American money.

² *Münchener Neueste Nachrichten*. Munich, Oct. 30, 1919.

³ *Frankfurter Zeitung*. Frankfort-on-the-Main, Oct. 17, 1919.

rienced stenographer-typewriters, but, on the other hand, the market is flooded with average and badly-trained workers.

New Regulation of Unemployment Relief.

IMMEDIATELY after the signing of the armistice, namely on November 13, 1918, the German Government issued an order regulating the payment of unemployment grants.¹ Under this order the communal authorities were required to pay unemployment benefits to residents who were without employment. One-half of the expenditure incurred by the communes was to be refunded by the central Government and one-third by the government of the particular State concerned. Various abuses were soon found to exist in connection with the above-named order, which was amended by one dated January 15, 1919. Under this measure the communes were required to refuse or withdraw unemployment benefit if the unemployed person refused to accept work offered to him. Furthermore, maximum rates of unemployment benefits were fixed in the order. These were not to exceed one and one-half times the daily rate of pay of unskilled labor as ascertained in accordance with the provisions of the Workmen's Insurance Code to be locally current, nor the maximum rates of relief prescribed for each locality according to certain district classes, arranged in connection with the rent allowance of Government officials, based on local variations in the cost of living. These district classes were divided into four groups, A, B, C, and a fourth group including both D and E, the unemployment relief rates for adult men ranging from 6 marks per diem in district class A, to 3.5 marks in district class D and E.

A further order dated April 16, 1919, amalgamated the two earlier orders and added further provisions in matters of detail.

The *Deutscher Reichsanzeiger*² contains an order dated October 27, 1919, issued by the German Minister of Labor amending in certain respects the regulations as to payment of unemployment relief contained in the order of April 16, 1919, and making the following additional provisions:

Grants from national or State resources to communes or unions of communes in refund of sums expended by them for unemployment relief may in future be withheld where the rate of relief exceeds the maximum laid down in the order of April 16, 1919.

If an unemployed person accepts a situation in which the full normal rate of pay can be earned only after a certain degree of familiarity with the processes, etc., has been acquired, the authorities of the place in which the person in question last resided are authorized

¹ See MONTHLY LABOR REVIEW, September, 1919, p. 170.

² *Deutscher Reichsanzeiger*. Berlin, Oct. 29, 1919.

to grant an allowance from their unemployment relief fund, for a period not exceeding six weeks, to supplement such earnings, provided the earnings do not exceed the rate of unemployment relief by more than one mark per day. The amount granted must not exceed the difference between the wages and the daily rate (increased by one mark) of the unemployment relief.

In localities belonging to the district classes A and B referred to above, the municipal authorities are empowered to grant to unemployed persons over 18, who for 60 days or more during the preceding three months have been in receipt of the full unemployment relief, a special additional "winter relief" from their unemployment funds, during the period from November 1, 1919, to March 31, 1920. The amount of such grant per month shall be equal to four times the daily rate of unemployment relief for persons out of work who have families dependent upon them and three times for other persons.

The central authorities of the individual States may authorize the payment of this "winter relief" in localities other than those situated in district classes A and B.

The national minister of labor is empowered to make grants to communes in aid of measures which have for their object the reduction of unemployment; the cost of such grants is to be borne by the national treasury, the State and the communes in specified proportions.

According to official statistics, the unemployed in Germany have received in the form of unemployment relief, from the revolution up to October 4, 1919, a total sum of 4,500,000,000 marks.¹ In the period from December, 1918, to September, 1919, the city of Leipzig has paid out in all 42,500,000 marks for unemployment relief, while the total sum spent for the same purposes during the three-year period 1915-1917 did not amount to 3,000,000 marks.²

Austria.³

ACCORDING to the latest estimates there are 96,000 unemployed persons in Vienna. This number, for a city with somewhat more than 2,000,000 inhabitants is alarmingly high, even though it has dropped since the days of the revolution, when the figure was 135,000. The degree of unemployment can best be realized when this is compared with the figure for the whole of lower Austria (exclusive of Vienna), which is barely 17,000. Nonmanual workers form the bulk of the unemployed, and of these the highly qualified employees are chiefly concerned. Former officials and private salaried employees in commerce are particularly affected, and have not the slightest

¹ Frankfurter Zeitung. Frankfort on the Main, Oct. 12, 1919.

² Münchner Neueste Nachrichten. Munich, Oct. 30, 1919.

³ Der Morgen. Vienna, Oct. 22, 1919.

hope of finding employment in their former occupation. The authorities in charge of unemployment relief, in conjunction with the Vienna Workers' Council, are endeavoring to formulate a scheme to enable these workers to utilize their previous experience in productive work.

A demand has been made on the Government that a new order should be issued at once which would place employers under the obligation to reinstate 20 per cent of the unemployed in their former situations. A previous order in this respect had not been complied with. The workers' council is to supervise the carrying out of the new order. The necessity for converting nonmanual into manual workers has been recognized.

The unemployed complain that the unemployment benefits paid are totally inadequate to meet the present cost of living. Representatives of the unemployed conferred with Secretary of State Hanusch. They did not demand an increase of the pecuniary unemployment benefits, but asked that the food ration should be increased by 50 per cent. Herr Hanusch explained the difficulties which this would involve, and the increase was not granted because the Government had already granted large subsidies, as follows: For bread alone, up to the present, 300,000,000 crowns; for meat 500,000,000 crowns; and for sugar 780,000 crowns daily.

The agreement between France and Austria concerning the employment of Austrian workers in the north of France will soon be signed. The communists are opposing the sending of workers to France and are working up public opinion in favor of sending the unemployed to Russia, where 800,000 workers are needed. The unemployed are also demanding that they shall be supplied with clothing and footwear during the winter months. This has been refused, as it would involve an expenditure of 100,000,000 crowns, and the State in its present financial condition can not undertake such expenditure.

CHILD LABOR.

Child Labor and the War.

HOW the barriers against child labor were let down during the war is among the subjects dealt with in the seventh annual report of the Children's Bureau of the United States Department of Labor. Even before the entry of the United States into the war American children went to work in increasing numbers to help fill contracts placed with American manufacturers by the belligerent nations. After this country entered the war, "a mistaken sense of patriotism and the many opportunities for employment at an abnormally high wage combined to draw permanently into industry large numbers of boys and girls, many of whom under normal conditions would have continued in school for several years."

The Federal child-labor law which had gone into effect on September 1, 1917, prohibited the employment of children under 16 in mines and quarries and of children under 14 in factories; limited the working day to 8 hours for children under 16 employed in factories and prohibited work for them between 6 p. m. and 7 a. m. But this law was declared unconstitutional by the Supreme Court on June 3, 1918.

The immediate effect of the Supreme Court decision in States where the State child-labor standards were lower than those imposed by the Federal law was the prompt restoration of the longer working day for children under 16 and an increase in the number of working children. In a number of States there was an appreciable increase in the violation of State laws. For example, in one State the inspectors of the Children's Bureau found that 47 out of 53 factories visited after the Federal law had been declared unconstitutional were violating the State law by employing children under 12. Four hundred and thirty such children were employed. In 49 factories visited when the Federal law was in force, only 95 such children under 14 had been found at work. In one State where the minimum age for employment in canneries was 14 years, 721 children under that age, including 50 who were not yet 10 years old, were found at work in the canneries in the summer of 1918.

It was in recognition of the seriousness of this increasing employment of young children that the War Labor Policies Board voted that compliance with the standards of the former Federal child-

labor law should be required of establishments engaged on Government war contracts made after the date of the decision.

In consequence of a number of complaints received by the Children's Bureau regarding illegal employment of children in shipbuilding plants, a special investigation of this industry was made by the Bureau in cooperation with the United States Shipping Board Emergency Fleet Corporation in the winter and early spring of 1919. Practically all the important shipbuilding plants on the Atlantic coast, Gulf of Mexico, and the Great Lakes were inspected, and there were found to be numerous violations of State and Federal laws. Even more serious, however, was the employment of children in hazardous occupations which in prewar times had been confined to older boys and men.

In order to counteract the effects of the war-time employment of children and to discourage such employment in the future, many communities undertook back-to-school and stay-in-school campaigns during 1918 and 1919 under the impetus of Children's Year. Some work to keep children in school and out of industry has been undertaken in the majority of the States. This work has included agitation for better enforcement of school-attendance laws; more attendance officers; more schoolhouses; more and better teachers with higher salaries; a longer school term; better child-labor laws; and provision for advising children in choice of occupation and assisting them in finding suitable employment.

By these and similar means many States hope to reduce the illiteracy which is so alarmingly prevalent, especially in rural districts of the United States and which is so great a stumbling block to Americanization; and to protect children against the hazards of too early employment.

INDUSTRIAL HYGIENE AND MEDICINE.

Composite Industrial Poisons: A Review.¹

BY WM. H. RAND, M. D.

IN A case of occupational poisoning the investigator usually attempts to isolate a single toxic factor that happens to be present as raw material, or as a by-product, waste product, or end product in an industry, and to hold it responsible for the syndrome of diverse and perhaps incongruous symptoms of a subjective or objective character which may develop in the workman.

There is an obvious fallacy in the conclusion to which this mode of procedure leads the observer. It is like a crude piece of detective work which attempts to fasten the guilt of a mysterious crime upon the one man in a community whose ill repute constitutes the sole ground of suspicion against him.

In the particular instance at issue the suspect may be innocent, and able to prove an alibi; or, if culpable, he may have been only an accessory or *particeps criminis*.

Every occupational disease is an industrial problem. Its diagnosis is often obscured and rendered doubtful by apparently incompatible physical signs. Each of these should receive due consideration, for a differential diagnosis can not be determined by giving attention to any salient feature in the case to the exclusion of all else. Ultimately the clinical picture must be visualized as a whole; but the separate symptoms must first be considered one by one.

The etiology of an occupational disease is always important, for a knowledge of the source of danger is prerequisite in order that appropriate measures may be adopted for its elimination. Against poisons used in the trades a man can often protect himself, provided he knows their origin and what their composition is.

For example, take the risk of poisoning in hat manufacture. It is commonly assumed that the peculiar danger in this industry arises from poisoning with the acid nitrate of mercury with which the fur is brushed in the process of carroting.

¹ This article is a review of a series of articles by Dr. Johann Mueller which appeared in the April to August, 1919, issues of the *Zentralblatt für Gewerbehygiene*.

But aberrant symptoms sometimes manifest themselves in carroters which are never present in uncomplicated mercurialism. Since every phenomenon must be accounted for, how are these anomalies to be explained? Not by attributing all unexpected developments and uncoordinated symptoms to the existence of some hypothetical idiosyncrasy of the individual. That is an overworked method of begging the question.

Inquiry at once elicits the fact that the carroting solution is not a simple mixture containing a single poison. Teleky gives the following formula for "die Sekretage:"

Mercury-----	Parts. 4
Sublimate-----	1
Nitric acid-----	32
Arsenic-----	2
Water-----	120

In handling such a compound one is exposed to a number of poisons. Consequently, the physical effects produced by the solution are not uniform but multiform.

It is true that the manifestations of arsenic poisoning in this instance may be masked or obscured by the more obvious effects of the mercury. But the more insidious lesions occasioned by the arsenic, and the systemic disturbances due to nitric acid can not be ignored. The problem is not to be solved by finding the value of x . The statement of the equation involves also the values of y and z .

Whenever possible, of course, it is advisable to isolate and identify the specific toxic agent in any case of industrial poisoning. But when several poisons enter into the composition of a mixture handled by the workman, the determination of the relative degrees of toxicity in the ingredients offers a complex question for analysis. Yet a candid investigator can not disregard any of the conditions.

In the instance already cited, where mercury is one of the elements in a carroting mixture, it is neither legitimate nor logical to impute all of the ill effects of the preparation to mercury poisoning alone. The other components of the solution are not inert, and the concurrent or consecutive pathological signs due to the presence of poisons other than mercury in the compound must be recognized and appraised.

The net results of mixed poisoning are ascribable in part to definite chemical reactions, but partly, also, to antecedent physical conditions which determine the absorption and elimination of toxic substances. Our knowledge of the reactions between the body cells and poisons is still meager, and better acquaintance with the molecular changes produced in the organism by agents of this nature is most desirable. But while much is still uncertain, some points have been made clear.

Buergi (cited by Mueller) has shown that the variable effects of mixed poisons depend on several factors:

1. Mixtures of two substances may yield a new chemical body.
2. The solubility of one substance may be modified by the addition of another.
3. The penetrability of the cell membranes by one substance may be affected by the addition of another.
4. The cell becomes by saturation with one substance more or less absorptive of another.

These statements seem like self-evident propositions, but it is well to have them explicitly formulated, since they have important corollaries. Thus, from the combination of two virulent poisons, for example, copper sulphate and phosphorus, there may arise an innocuous compound. Conversely, a highly poisonous compound may result from mixing two nontoxic substances (iodide of potassium and calomel). It is in this way that industrial poisons often originate.

Now, the toxicity of a substance depends on its potential penetrability into the body, and on its combination in the body with the tissues of vitally important organs in sufficient concentration to cause functional disturbances.

Poisons are absorbed by the system at a variable rate, which depends mainly on the solubility of the substances. Lead and its salts, for example, produce their effects on the nervous and muscular tissues only after the lapse of weeks or months. Lead is very slowly absorbed, but it is still more slowly eliminated; hence its cumulative action.

Rapidity, facility, and degree of poisoning are conditioned also by the quantity absorbed, and by the frequency with which the poison is introduced into the system. A given amount of morphine, for example, administered in fractional doses at brief intervals, produces a more powerful effect than the entire quantity given as one dose.

The principle holds good in reference to many industrial poisons. A short exposure to the hazard of poisoning in an atmosphere heavily charged with lead dust may occasion little trouble or none at all, while long-continued employment in a room where lead-dust diffusion is much less dense may give rise to chronic plumbism of the gravest type.

List of Industries Involving Use of Poisons.

DR. JOHANN Mueller of Taegervilen has published in the *Zentralblatt für Gewerbehygiene* (for April, 1919) a table in which are listed numerous industries and their peculiar processes in which workmen are subjected to the influence of multiple toxic agents (mixed poisons). The table is reproduced in full on account of its intrinsic value and its practical suggestiveness.

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN VARIOUS INDUSTRIES.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Sulphuric acid manufacture.	Roasting of pyrites.	Sulphurous acid; lead; sulphuric acid.	Arsenic impurities; arsenic; lead; evolution of arseniureted hydrogen; development of nitrous gases in the lead chamber and tower.	Specially dangerous is cleaning of the lead chamber in case of insufficient ventilation. Nitrous gases. Arsenic compounds. Sulphurous acid. Chronic lead poisoning.
Nitric acid manufacture.	Distillation of niter and sulphuric acid in cast-iron cylinders.	Fuming nitric acid with nitrous acid.	Nitrous gases.....	Acid fumes, especially in case of leaks.
	Production of baryte nitrate by dissolving barium sulphate in nitric acid.	Nitrous acid; tetroxide of nitrogen.	Nitrous gases.....	In the ignitions and explosions much nitrous gas is set free. Used in pyrotechnics and explosive trades.
	Manufacture of lead nitrate by dissolving lead oxide in nitric acid.	Nitrous acid; tetroxide of nitrogen; lead.	Nitrous gases.....	Used in color printing plants, match manufacture, and chrome-yellow pigment.
	Manufacture of the acid nitrate of mercury.	Nitrous acid; tetroxide of nitrogen; mercury.	Nitrous gases.....	Carroting fur, hat manufacture, metal amalgam production, bronzing and silvering.
	Manufacture of silver nitrate.	Nitrous acid; tetroxide of nitrogen; silver.	Nitrous gases.....	Silver.
Soda manufacture.	Manufacture of sodium nitrate by fusing niter with metallic lead.	Nitrous acid; tetroxide of nitrogen; lead.	Nitrous gases.....	Used in photography and in silvering glass pearls.
	Leblanc process...	Sulphuric acid; nitric acid.	Arseniureted hydrogen from impurities of arsenic. From smelting comes much carbon monoxide and carbon dioxide. By the efflorescence of soda residua, sulphureted hydrogen.	The evolution of carbon monoxide is especially dangerous. Acid fumes also injure the organs of respiration and the teeth.
Chlorine manufacture.	Veldén process....	Hydrochloric acid; manganese; chlorine.	.....	Chlorine danger great.
	Deacon process....	Hydrochloric acid; chlorine.	Since the sulphuric acid is taken from the sulphate furnace direct, it holds as impurities arsenic, sulphuric acid, and nitric acid.	Chlorine acne, probably a combined effect of chlorine and tar (chlorinated phenol).
	Electrolytic processes.	Alkaline chlorides; chlorine; mercury.	.....	.....
Chloride of lime manufacture.	Manufacture of the salt from lime and chlorine.	Lead (chambers); chlorine.	.....	Chlorine poisoning from shoveling the lime; too early entrance into chamber.
Chloride of phosphorus manufacture.	Oxidation of phosphorus and hydrochloric acid. Use of carbon disulphide as solvent.	Hydrochloric acid; chlorine; carbon disulphide.	Carbon monoxide; phosphorus trichloride; phosphorus pentachloride; arseniureted hydrogen.	.....
Sulphur chloride manufacture.	Heating chlorine and sulphur.	Chlorine; hydrochloric acid.	Hyposulphurous acid.	Decomposition by addition of water with formation of hydrochloric acid fumes.
Phosgene manufacture.	Chlorine and carbon monoxide treated with animal charcoal.	Chlorine; carbon monoxide; phosgene.	.....	Used mainly in dyestuff manufacture. The effect is a combined one—of the entire molecules and decomposition products.

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN VARIOUS INDUSTRIES—Continued.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Chloride of zinc manufacture.	Heating of zinc oxide and hydrochloric acid.	Chlorine; hydrochloric acid.	Arseniureted hydrogen.	Used as a mordant.
Methyl chloride manufacture.	Made from methyl alcohol, common salt, and sulphuric acid.	Methyl alcohol; acid fumes; methylchloride.	Arseniureted hydrogen; nitrous gases; impurities of methyl alcohol.	
Chloroform manufacture.	Distillation of alcohol, acetone, and chloride of lime.	Chlorine; acetone; alcohols.	The most important are: Amyl alcohol; ethyl chloride; aldehyde; allylchloride; tetrachloromethane; phosgene; chlorine derivatives of propyl, butyl, amyl acids.	Decomposition of phosgene, ethyl chloride, and other chlorine compounds by free hydrochloric acid in the air. In gas illumination evolve carbon dioxide, carbon monoxide, and hydrochloric acid, with traces of free chlorine, but no phosgene. These products of combustion may cause severe irritation of the mucous membranes.
Carbon tetrachloride manufacture.	Action of chlorine in carbon disulphide with chloride of antimony or aluminium.	Chlorine; carbon disulphide; methylchloride.		
Nitrous chloride manufacture.	Chlorine and sal ammoniac.	Chlorine; ammonia.	.....	Highly explosive.
Cyanochloride manufacture.	Chlorine and cyanide of mercury.	Chlorine; mercury; cyanochloride.	Hydrocyanic acid.	
Dimethyl sulphate.	Sulphuric acid and methyl alcohol.	Alcohol; sulphuric acid; dimethyl sulphate.	Arseniureted hydrogen; nitrous gases.	It acts: (a) As a whole molecule; (b) By splitting up with water it develops sulphuric acid effect.
Explosives: Fulminate of mercury.	Solution of mercury in nitric acid with alcohol.	Mercury; nitrous gases; fulminate of mercury.	Acetic acid; cyanide compounds.	Used in percussion-cap manufacture. In filling the caps there is special danger of chronic mercury poisoning from mercury fumes given off in pressing and filling as a result of small explosions giving rise to nitrous gases.
Nitroglycerin.	Action of mixed nitric and sulphuric acids on glycerin in lead vats.	Sulphuric acid fumes; nitrous gases (from the acid mixture especially, but also by denitrating of waste acids); nitroglycerin; lead.	Arseniureted hydrogen.	Dynamite is produced by mixing nitroglycerin with siliceous earth ("dope"). Mixing and sifting of dynamite cause chronic ulcers at the finger tips and under the nails.
Gun cotton.	Action of a mixture of nitric and sulphuric acid on cellulose.	Acid fumes; nitrous gases; cyanide compounds.	Arseniureted hydrogen.	According to Koelsch, the nitrated benzols are virulent poisons, and, primarily, blood poisons: (Methemoglobin formation, damage to red blood cells.) Perhaps, also, primary injury to the central nervous system.
Smokeless powder.	Gelatinizing of gun cotton with acetone.	Solvents like acetone, alcohol, ether, carbon disulphide, etc.	.....	Toluol nitrites are relatively harmless and cause symptoms of poisoning only after long-continued exposure. Severe poisonings are traceable to impurities.—Koelsch.

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN
VARIOUS INDUSTRIES—Continued.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Explosives— Concluded. Smokeless powder— Concluded. (Other ingredi- ents.)	Nitrites.....	Nitrobenzol; nitro- toluol; dinitro- benzol; phenols; picric acid, etc.	Benzol; benzol ni- trites; unnitri- table hydrocar- bons; tetra- nitromethane.	
Shot and bullet manufacture.	For hardening ar- senic and anti- mony are em- ployed.	Lead; arsenic; an- timony.	The proportion of arsenic used is 0.2 to 0.8 per cent; of anti- mony 8 to 14 per cent.	
Iodine and bro- mine manu- facture.	Production of io- dine and bro- mine salts from mother liquors by the action of chlorine and oxidation agents.	Chlorine; iodine; bromine (wood spirit as extrac- tion agent).	Irritating chlorine compounds in small quantities. (Slight action).	
Phosphorus in- dustry.	Production of phos- phorus from phosphorites by means of sul- phuric acid, or by electrolytic process.	Acid fumes; phos- phorus fumes. In the distillation of the phos- phorus, phos- phine is given off, with phos- phorus fumes and carbon monoxide.	Arseniureted hy- drogen. By disintegration of the bleached bones with sul- phuric acid arise sulphureted hy- drogen, carbon dioxide, hydro- cyanic acid, hy- drochloric acid, hydrofluoric acid.	
Swedish matches.	Phosphorus sul- phide produc- tion by melting together red phosphorus and sulphur.	Carbon disulphide in the extrac- tion of phos- phorus.	Sulphureted hy- drogen.	Besides the trouble from gases, acid fumes, etc., the dust is especially dangerous on account of its gross content of caustic lime (in Thomas slag as high as 50 per cent).
Artificial fertil- izers.	Extraction of phosphate of lime by sulphur- ic acid.	Acid fumes; sul- phurous acid; carbon dioxide.	Hydrofluoric acid (since nearly all phosphates con- tain calcium fluoride); ni- trous gases; ar- seniureted hy- drogen.	
India rubber: Vulcanizing.	By the hot pro- cess at about 140° sulphur compounds emerge (chlor- ine, barium, and antimony sulphides). By the cold pro- cess, dipping the gum in a mix- ture of sulphur chloride and carbon disul- phide (or its substitute prod- ucts).	Sulphur chloride; antimony. Carbon disulphide, as a substitute; benzine; turpen- tine oil; carbon tetrachloride; dichlorometh- ane; ether; ace- tone; benzol and its derivatives; anilin.	By disintegrating sulphur chloride in water: sul- phurous acid; sulphureted hy- drogen (from antimony sul- phide).	Nearly all rubber goods are reinforced, often to the extent of 50 per cent of substitutes mostly compounds with vege- table oils and sulphur chlorides, but sometimes containing lead or mer- cury. Hygienic control can under no circumstances be slackened over processes conducted often accord- ing to secret formulae which prescribe strange ingredients for the mak- ing of dyestuffs.

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN VARIOUS INDUSTRIES—Continued.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Dyeing.....	Substances principally used are: antimony sulphide; cinnabar; zinc white; frankfort black; white lead and other lead colors (in the making of rubber gloves); also arsenic colors.	Mercury; lead; arsenic.	Sulphureted hydrogen especially by the reduction of the sulphide of antimony with acids.	
Artificial silk manufacture: 1. Nitrocellulose.	Nitriting cellulose. Action of a mixture of nitric and sulphuric acids on cellulose. Dissolving camphor, toluol, etc., in acetic acid. Drying and spinning room processes.	Acid fumes; nitrous gases; cyanide compounds; acetic acid; camphor; toluol alcohol fumes; ethers; undissolved hydrocarbons; ammonium sulphate.	Arsenureted hydrogen; sulphureted hydrogen; ammonia.	
2. Oxide of copper and ammoniac process.	Denitrating..... Precipitation of copper oxide and solution in strong ammoniac menstruum.	Strong alkalis and acids; acid fumes; ammonia.	.....	The alkali and ammoniac manufacturers should do away with this method. Fire risk small.
3. Viscose manufacture (nitrocellulose).	By use of strong alkalis, but mostly with very large quantities of carbon disulphide.	Strong alkalis; ammonia; carbon disulphide.	.....	Like rubber manufacture.
4. Acetylcellulose.	Production of acetylcellulose by addition of ethyl chloride to a solution of nitrocellulose. Use of large quantities of anhydrous acetic acid. Spinning process: Dissolving in ether, alcohol, acetone, etc., and drying. The solvents are poisonous beyond all else.	Nitrocellulose; acid fumes; nitrous gases; cyanide compounds; solvents—acetone; amyl acetate; carbureted hydrogen; benzol and its derivatives or homologues. Ether and alcohol fumes; acetone, etc.	.....	Fire danger very great.
Celluloid industry.		Acetone; aceto-chlorhydrin; ether; benzine; benzol; amyl acetate; anhydrous acetic acid; nitrobenzol; dinitrobenzol; nitrochlorbenzol; epichlorhydrin; methyl alcohol; carbon disulphide; carbon tetrachloride; hexachlor-ethylin, and many other chlorine products. Mixtures: Benzine + amyl acetate; benzine + methyl alcohol; benzine + alcohol; xylol + alcohol; ether + alcohol + acetic acid.	Ignition and detonation, especially when there are drafts of air, evolve fumes of carbon monoxide, carbon dioxide, nitrous gases, hydrocyanic acid, acrolein, and camphor.	Celluloid technique is extremely complicated. Dangers are mostly occasioned by the solvents; but celluloid itself has many peculiarities which make it very unsafe when stored in great heaps: 1. Ready decomposability. 2. Inflammability so that it ignites like a match. 3. Evolution of poisonous gases—(a) by decomposition and detonation; (b) by secondary explosions of detonating gases mixed with air. (Limit of explosibility, a content of 8 to 40 per cent.)

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN VARIOUS INDUSTRIES—Continued.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Celluloid manufacture.	Made of camphor, alcohol, and pyroxalin. Pyroxalin is obtained from vegetable fibers by treatment with sulphuric acid and nitric acid.	Alcohol; camphor; acid fumes; nitrous gases.		
Gas industry: Coke ovens.	Dry distillation, purification processes.	Illuminating gas: carbon monoxide, carbon dioxide, ammonia, methane, tar; ammoniac water gas: sulphureted hydrogen, carbon disulphide, hydrocyanic acid; rhodan compounds (phosphorus, arsenic, etc.).		According to Jehle and Layet, the hygienic condition of the gas-plant workman is by no means satisfactory. Especially in the condensing and purification rooms, the air is always charged with gas. Danger of poisoning is notably great in case of leaks and industrial accidents (bursting of pipes, etc.).
Process of gas purification.	Extraction of ammonium salts by washing with water. Extraction of sulphur with carbon disulphide. Production of the ferrocyanide of potassium.	Cyanogen; ammonia; cyanide compounds; rhodan compounds. Carbon disulphide; ethyl trichloride.		
Ammoniac production.	Disintegration of the nonvolatile ammonium compounds with caustic alkali. Distillation.	Ammonia; sulphuric acid; metaphosphoric acid. Penetration of ammonia fume into the acids gives rise to ill-smelling gases. Sulphureted hydrogen; cyanogen. Lead poisoning from lead.	Pyridin, pyvrol, phenols, tar.	
Calcium carbide manufacture.	Reduction by smelting or electrochemical process, producing acetylene by addition of water.	Acetylene; carbon dioxide; carbon monoxide.	Ammonia; sulphureted hydrogen; especially phosphine (to the amount of 0.2 per cent).	
Tar industry...	Dry distillation of anthracite coal. Fractional distillation.	Tar fumes consisting of: 1. Hydrocarbons of the methane series, paraffin, olefin. Hydrocarbons of the aromatic series, benzol and its homologues, naphthalin, anthracene, phenanthrin, etc. 2. Phenols, (cresolin, naphthalin). 3. Sulphides (sulphureted hydrogen, carbon disulphide, mercaptan, thiophen).	Poisonous end-products: Pyridin, benzol, toluol, zylol, naphthalin, phenols, salicylic acid, picric acid, cresols, naphthols, anthracene.	Production of dense fumes of tar, especially in extraction plants, wood-preserving establishments, roofing-paper factories, and, above all, from open kettles. Severe skin diseases occur (tar itch).

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN VARIOUS INDUSTRIES—Continued.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Tar industry— Concluded.		4. Nitrogen compounds (ammonia, methylamin, anilin, etc., pyridin, etc.).		
Dye manufacture.	1. Nitrites with nitric acid and sulphuric acid. 2. Reduction to amines. 3. Sulphurization with concentrated sulphuric acid. 4. Conversion of sulphur acids into phenols by fusion with caustic soda. 5. Chlorinating, brominating, combining with phosgene. 6. Methylating.	(a) Poisonous products: Methyl alcohol, ethyl alcohol, phosgene, formaldehyde, hydrocarbons of the aromatic series (benzol, toluol, xylol, naphthalin, anthracene, phenols, cresols), oxalic acid, tar, acetaldehyde, anilin, toluidin, nitrobenzol, picric acid, phenylglycoccol, nitrosodimethylanilin, monodinitrobenzol. (b) Toxic reagents: chlorine, nitric acid, sulphuric acid, sulphureted hydrogen, ammonia, methylbromide, methyl iodide, arsenic, antimony, lead, chromium dimethyl sulphate. (c) Poisonous end-products: Nitrous products (nitrobenzol, toluol, picric acid), aromatic bases (toluidin, anilin, xylidin, dimethylanilin), sulphur acids, phenols and cresols, paraphenylenediamin, suspected dyestuffs (as a rule, of course, dangerous only in large quantities), saffron yellow, anilin orange, picric acid, dinitronaphthol, nitrous dyestuffs, aurantia-hexanitrodiphenylamin, kaiser yellow, ethyl and methyl violet maldola dyes, corbulin, fast blue, etc.	Incidental products: Nitro and amino compounds of many varieties (nitrobenzol, acridin, cyanogen, diamin. By-products and impurities: Ammonia, sulphureted hydrogen (from sulphur dyes), nitrous gases, acid fumes, cyanogen compounds, arseniureted hydrogen stibine.	The most frequent poisonings are due to anilinbenzol and its homologues, nitrobenzol, nitrous gases, arsenic. The shops are generally well equipped from a sanitary point of view. But poisonings continually occur as results of improvidence or accident. A special danger is that arsenic acts partly as an acid impurity in arseniureted hydrogen, partly also because it is used in substance for bright colors. (Every factory boasts of special patents and special processes.)
Metal industry: Lead.....	Roasting ore. Reduction of the oxides by coal, Patterson crystallization process. Lead refining.	Lead danger.....	Sulphur dioxide; arsenic; antimony; smoke of smelteries.	

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN VARIOUS INDUSTRIES—Continued.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Metal industry—Con.	Whitelead manufacture by the action of acetic acid fumes and carbon dioxide (coke burning) on lead plates in closed chambers.	Carbon dioxide; acetic acid; lead.	-----	Especially hazardous is the work in the oxidizing chamber. Smeltery smoke: A product of imperfect combustion. It contains carbon monoxide, sulphur dioxide, dust of toxic metals (lead, zinc, mercury, arsenic, antimony). Smelting disease. Pallor of countenance. Lowering of physical resistance. Finally, specific poisonous effects. The smeltery smoke is always heavily charged with arsenic. There is absorption of small quantities of arsenic or arsenious oxide.
Mercury....	Extraction from cinnabar in blast furnaces. Condensation and distillation.	Mercury.....	Sulphur dioxide; smeltery smoke.	Like risks exist in the smelting of cobalt, nickel, lead, copper, iron, silver, and zinc.
Arsenic and antimony	Roasting of arsenic-bearing ores.	Arsenic; antimony	Smeltery smoke, arseniureted hydrogen, stibine.	
Iron.....	-----	-----	Furnace gases constitute the chief danger. These consist of arseniureted hydrogen, stibine, carbon monoxide, sulphur dioxide, hydrocyanic acid.	
Ferrosilicon	-----	From this come some mineral acid products, sulphureted hydrogen, for example.	Phosphine, arseniureted hydrogen, sulphureted hydrogen (with moisture), especially under 70 per cent in amount; carbon dioxide; carbon monoxide; sulphureted hydrogen; sulphur dioxide; and arseniureted hydrogen.	Ferrosilicon virtually always contains phosphorus, arsenic, and sulphur, so that the development of very poisonous compounds is to be expected. (Poisonings occur on ocean vessels when as a result of the entrance of water such gases evolve.)
Lime burning..	In blast furnaces which are filled with a mixture of limestone and coke.	-----	-----	-----
Dyeing.....	Mordanting the fiber and dyeing it, often in leaden vats.	Mordants: Chromium compounds, especially potassium dichromate, acetic acid, sulphuric acid, zinc chloride, potassium chlorate. Solvents: Methyl-ethyl-amyl alcohol, turpentine, benzine, benzol-acetone. Dyes: Lead and arsenic colors, anilin colors, nitrite of lead colors, lead chromates. Bleaches: chlorine, sulphurous acid, chloride of lime, phenol, fluorine.	Acid fumes, especially hydrochloric acid, chlorine, ammonia, acetic acid, cyanogen, rhodan compounds.	Schuler reports that severe epidermal inflammations result from using anilin black.
Tanning.....	Depilation and curing of skins.	Sulphide of soda, lime gas, arsenite of potas-	Carbon dioxide; cyanogen compounds; sul-	Great danger from pollution of the waste water.

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN VARIOUS INDUSTRIES—Continued.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Tanning—Con.	Arsenic for denuding of wool, cyanogen for depilation. Ash process.	sium, formaldehyde, oxalic acid, cyanogen. Lime water, arsenite of sulphur.	phureted hydrogen; sulphur compounds. Putrid substances like sulphureted hydrogen, methane, carbon dioxide, sulphur compounds, cyanogen.	
	Mordant of tan and its substitutes (quebracho, clay mordants, decoction of wheat, bran, and water, etc. Chrome tanning. Dyeing with anilin colors, lead colors, etc.	Chromium..... Anilin, anilin colors, potassium ferrocyanide, lead, arsenic, sulphuric acid, mercury colors, color solvents.	Sulphur dioxide.	
	Used especially for bright colors: Lead acetate and sulphuric acid solutions.			
	Carroting.....	Mercury; nitric acid; nitrous gases; arsenic.		
Furrier industry.	Fur dyeing.....	White lead, lead sulphate, phenylendiamin.	.....	Especially hazardous as a house industry.
Accumulator (electric) factories.	.....	Litharge, minium, sulphuric acid, mercury.	Acid fumes, arseniureted hydrogen.	There is a whole series of ill-defined ailments produced by the action of irritating acetone fumes, and which, according to Lewin, cause asthma and bronchitis, and, according to Cossmann, result in a condition resembling diabetic coma, and complicated at the same time by lead poisoning. There are other combinations of lead and acid action.
	Celluloid solutions.	Usually acetone and amyl acetate (but other solvents also).		
Incandescent lamp factories.	Use of air pumps. Incineration of incandescent bodies.	Mercury; fumes of nitric acid, colloidion, and ether.	Nitrous gases.	
	Phosphorus pentachloride drying.	Amyl acetate; smelter gases. Mixtures: Acetylene, illuminating gas, nitrous gas, etc.		
Galvanotechnic.	Galvanic reduction of gold, silver, copper, nickel, zinc, etc.	Hydrocyanic acid, dicyanogen, ferrocyanide of potassium, mercury (from the electrodes).	Lead, arsenic, and antimony from impure metals.	Workmen may be as much endangered by maceration fluids as by the escaping fumes, though acute poisoning by prussic acid is rare. Chronic effects are more frequent (owing especially to the inadequacy of precautionary regulations). Chronic eczema is common as a result of contact with the solvents.
	Breweries.....	Arsenious acids, hydrochloric acid, antimony.	.....	
Tinning, etc., by hand.	Cleaning and corroding of metals.	Sulphuric acid, hydrochloric acid. Metals, such as lead, arsenic, etc.; sal ammoniac.	Arseniureted hydrogen, ammonia.	
	Tinning.....	Acid fumes, metal fumes.	Arseniureted hydrogen, ammonia.	
	Brass refining.....	Nitrous gases, chlorine oxides.	.....	Widely practiced in every small metal works.

LIST OF MIXED POISONS TO WHOSE INFLUENCE WORKMEN ARE SUBJECTED IN VARIOUS INDUSTRIES—Concluded.

Industry.	Process and product.	Poisons used in manufacture, and chief end products.	Poisonous by-products and impurities.	Remarks.
Solder manufacture.	Hard solder is made of brass and zinc. Soft solder is applied to the joint as a saturated solution of tin and lead in hydrochloric acid. (Gases Acetylene, illuminating gas, oxygen admixtures.)	Zinc fumes, zinc oxides, lead, hydrochloric acid.	In this category belong gases and fumes of the arseniureted hydrogen combustion material, hence mostly carbon monoxide.	Morbidity directly due to occupational poisonings (aside from plumbism) is not, indeed, great. Roth shows, however, that phthisis plays a leading role among tinsmiths. For this result the gases and fumes rising from the solder are surely responsible, provoking irritation of the respiratory organs (and by their continual action greatly lowering the resistance of the system).
Glue, putty, cement, etc., manufacture.	Extraction of fats..	Benzine, benzol, acetone, carbon disulphide, sulphur chloride, sulphur dioxide, turpentine, carbon tetrachloride, etc. Acid fumes.....	Acrolein, sulphureted hydrogen.	It is worthy of notice that there are many secondary or collateral trades which are subject to special risks of the same sort.
	Recovery of the residua from the glue kettles with sulphuric acid.	Lead colors; catalytic agents.	Ammonia, nitrogen fermentation products, Mercaptan. Arseniureted hydrogen.	
	Compositions.....		Combustion gases, like carbon monoxide.	In putty factories there are mixed poisonings from lead, mercury, and carbon disulphide.
	Putty made of litharge, red lead, and linseed oil.	Lead, mercury, carbon disulphide, turpentine, benzine, benzol tar products.		
	Resinous cement made of wax, turpentine, etc. Solution of india-rubber and shellac in coal tar oil.			
Porcelain manufacture.	Ultramarine production is a result of fusing a mixture of kaolin, sulphates and charcoal.		Sulphuric acid, sulphur dioxide, carbon monoxide, carbon dioxide.	Mixtures of carbon disulphide holding materials are used as cleansing agents or grease detergents in combination with lead, less often with mercury compounds in cement, and in plastic masses for insulation.
	Dyeing and painting.	Lead; arsenic; silver nitrate; nitric acid; chromium compounds (hydrochloric acid, hydrofluoric acid; sulphuric acid).		
Enamelled ware manufacture.	As raw materials are used felspar, fluorspar, clay, niter, soda, borax, lead oxide, tin oxide.	Lead; tin oxide; sulphur dioxide; antimony.	Nitrous gases, acid fumes, carbon dioxide, carbon monoxide.	Glazes react powerfully in combination. Dry-handed. Dust, etc. Furnace gases, etc.
	Colors.....	Chromium, manganese, lead, arsenic.		
Photography...		Bromine, chlorine, iodine, chromium, mercury, silver nitrate, cyanogen, ferrocyanide of potassium, anilin, nitrobenzol, reducing agents (blood poisons).		

A cursory survey of Mueller's tabulation is likely to leave on the reader an unfavorable impression as to its value. The author avoids a discussion of such matters as the diagnosis, symptoms, and treatment of occupational poisonings, and waives all reference to other related subjects of equal importance. His grouping of the industries seems arbitrary and anomalous, and the toxic substances said to be used or generated in the processes of manufacture are so diverse in their nature and effects that the entire presentation appears like a capricious collection of ill-assorted and incoordinate data.

But on closer analysis and from a different angle, what seemed a caricature becomes a clear picture. Let us take the author's point of view. He did not propose to make an elaborate and exhaustive classification of industrial poisons. He merely undertook to study intensively a single phase of the subject and to report his observations.

Now the lesions produced by exposure to conglomerate poisons are hybrid and heterogeneous; and it is the distinguishing merit of Mueller's work that it is the first to take cognizance of the complex and erratic forms of what may be termed amalgam poisonings in the trades.

The dominant features in the author's classification are found in columns 3 and 4 of the table, and relate to the poisons used in manufacture, and poisonous by-products and impurities. Everything else is subordinate. The industry and the process are relatively unimportant. It is the mixed character of the poisoning that Mueller aims to illustrate, and that alone. He is a pioneer in this field of exploration; though analogous examples of multiple infection are common in other departments of medicine. In influenza, for instance, it has been proved that Pfeiffer's bacillus is not the sole infective agency, but that pneumonococci, staphylococci, and streptococci are often present in a given case, causing grave and discrepant complications.

The appearance at this juncture of the foregoing elaborate table of mixed poisons used in the industries may be regarded as significant. It will be recalled that a time limit of 10 years was suggested by the International Association for Labor Legislation in 1911 as the maximum interval before the "List of industrial poisons" adopted and promulgated in that year should be subject to revision and brought up to date. This period has nearly expired, and it is evident that preparations are under way to insure incorporation in the revised list of additional matter of special importance.

Though this work of Mueller in its present form contains no intimation that it is intended to serve as a basis for preliminary discussion or subsequent action at some future session of the association, many of its innovations deserve, and will undoubtedly obtain, recognition in the prospective revision.

Value of Mueller's Records.

MUELLER resumes the consideration of composite industrial poisonings in the May number of *Zentralblatt für Gwerbe-hygiene*, analyzing and correlating the data tabulated in his paper published in the April issue of that periodical. He amplifies the discussion still further in a series of articles in the same magazine for the months of June, July, and August.

These consecutive records constitute an authentic and valuable contribution to the knowledge of a subject concerning which there is yet much to learn.

Mueller regards as an imminent danger the practice, now so common in many industries, of manufacturing substitute products to replace staple commodities. What was called an adulterated article before the war at present goes under the euphonious name of a "substitute product"; and the middleman, the author says, has no interest in exposing the fraud. When methods and processes of production are fraught with danger it is customary to conceal the fact, and Mueller's experience indicates that fraudulent dealers seek to avoid an expert investigation.

In one instance cited he saw the oily waste products of a chemical factory made into shoe polish, washing powder, etc., disguised sometimes with perfumes so as to fit the product for trade competition. The manufacturer troubled himself very little when the excessive proportion of nitrobenzol added to the mixture caused hemoglobi-nuria and severe poisoning, "such as we have repeatedly seen from the use of shoe polish and floor wax." (In a footnote the author adds that during the war not less than 3,000 washing powders, dangerous to health and injurious to the laundry linen were manufactured in Germany.)

Such reckless contempt for the consequences of their action on the part of unscrupulous manufacturers is likely to ruin the conscientious producer who has some regard for the law and the general welfare. The author holds that it is the plain duty of the Government to pluck up by the roots these fraudulent enterprises which vegetate in the dark, in order to protect the honest producer on the one hand and the unsophisticated user on the other. The latter can not know his danger, since, so far as possible, it is kept out of sight.

The coal used in the manufacture of acetylene often contains much sulphur and phosphorus. Although acetylene gas is poisonous only when highly concentrated, reports and observations attest the frequent occurrence of poisonings by this agent. The impure products which are evolved in the processes of manufacture form poisonous compounds that prove injurious, especially the hydrocarbons.

Acetylene made from poor coal contains as much as 0.1 per cent phosphine and sometimes arseniured hydrogen, sulphureted hydrogen, and telluric compounds like ferrosilicium, the dangers of which have only recently become known.

We saw one man whose duty was to clean a great many acetylene lamps. For a long time he felt ill when engaged in this work, especially when these lamps were not lighted but gave off acetylene gas. He suffered from headache, nausea and malaise, choking sensations, tenderness in the region of the liver, etc.

Another form of acetylene poisoning results from imperfect combustion of the gas. This affords an example of the manner in which a host of industrial poisons may crop out in a single trade. The example is all the more interesting because in an industrial process now extensively employed in every large metal works the acetylene jet is utilized for welding. In this operation oxygen and acetylene must be kept mixed in definite proportions. The optimum for perfect combustion consists of an acetylene content of about 7.3 per cent. If acetylene enters into the combination in higher proportions, combustion is imperfect; and, as a result, there are evolved hydrogen, water, carbon dioxide, and above all carbon monoxide. From prolonged imperfect combustion of acetylene comes phosphine which with an attenuation of 1:100,000 kills rabbits in one hour; so it appears that even when slight concentrations occur, they are liable to injure the health.¹

With the diffusion of unconsumed acetylene we may have sulphureted hydrogen and arseniured hydrogen, so that in acetylene welding it is possible that six poisons may be produced:

1. Acetylene (which forms an unstable combination with the hemoglobin of the blood).
2. Carbon dioxide.
3. Carbon monoxide (product of imperfect combustion).
4. Sulphureted hydrogen (from the sulphur content of the coal which is converted into sulphureted hydrogen by the carbide process and finally oxidized into sulphur dioxide).
5. Phosphine (from the phosphorus content of the coal).
6. Arseniured hydrogen (also resulting from the production of hydrogen).

A workman often solders with an acetylene blast under a large, open brewery vat. The space overhead is closed in, so that hot gases remain in the cupola. Sometimes while at work the apparatus is extinguished because the nozzle of the oxygen blast pipe becomes stopped up. Hence arise—

1. Products of imperfect combustion in consequence of the great variation in pressure of the blast jet.

¹ In the Journal of the American Medical Association for Sept. 6, 1919, p. 801, the death by acetylene gas poisoning is reported of "a man of 34 who had been welding for half an hour inside a large boiler."

2. The constituents of acetylene. After a variable period the workman becomes ill and is obliged to go into the open air; he suffers from nausea and has an irritating cough. Icteric symptoms follow. Recovery is slow.¹

This process is used also by tinsmiths, and the resulting ailments are often regarded as the effects of acetylene poisoning; but they are in reality manifestations of mixed poisoning due to impurity of the products and to carbon monoxide.

Diagnosis of Poisoning and Clinical Histories.

THE diagnosis of poisoning is often difficult. Poison acts upon the body like any other injurious agent, causing functional disturbance; and the human body reacts in the same way whether this disturbance is due to a foreign substance invading it from without or whether the noxious material is generated within the organism itself. "There are no symptoms of exogenous poisoning which may not with equal propriety be traced to another cause."

Current popular opinion assumes that an exact chemical reaction is necessary to demonstrate the presence of poisonous ingredients in a mixture and establish a differential diagnosis of poisoning. But it is possible to satisfy this requirement in only a few instances, mostly those of acute poisoning. In chronic cases, as encountered in the industries, the proof of poisoning by a single toxic substance is often very difficult, and the diagnosis becomes impracticable by this method when several poisonous substances act in combination.

In a certain number of cases it is feasible, of course, directly to identify the poison (lead, mercury, etc.) though generally the clinical diagnosis must rest on secondary symptoms. It is deserving of attention that, at the time the symptoms of poisoning appear in chronic cases, many poisons can no longer be isolated as such by chemical means, and under special conditions are not demonstrable at all. Not only are the readily decomposed substances (such as sulphureted hydrogen, carbon disulphide, nitrous bodies, cyanogen, and carbon monoxide) often changed or eliminated, but even lead may have left the body when symptoms of plumbism first develop. Under these circumstances a positive certainty is attainable only when one can analyze the clinical picture by the aid of all accessory means, and especially by an examination of the blood and of the nervous system.

"In industrial poisonings," says Mueller, "we do not meet with the clinical pictures which correspond to the typical lecture-room examples, and by the combination of different poisons there naturally arise the most divergent variations of effect, according to the quantity and the time of absorption. Experiments as to the effects

¹ *Zentralblatt für Gewerbehygiene*, June, 1919, p. 99.

of mixed medicaments are not yet so far advanced as to enable one to deduce any general law; but they most impressively show that through new combinations specific reactions may be produced, that the action of some components may be intensified, as the effect of each is sometimes reduced, sometimes potentized, according to the mutations in the nature of the mixture."¹

The author relates some illustrative clinical histories:²

I. A workman suffered an attack of enteritis without apparent cause. He felt as if he were intoxicated, especially in the evening, and complained of headache, profuse perspiration, and loss of appetite. In addition he had periodical lancinating pains in the pectoral muscles and in the thighs, without paralysis or aggravation on pressure. Patellar reflexes were lowered. With fingers outspread, a rapid, fine, lateral tremor occurs. There is slight albuminuria. On questioning him, salivation is found to exist. The whole clinical picture, with entire absence of fever, suggests a diagnosis of probable poisoning.

The peculiar lancinating pains in the pectoralis muscles lead to the conjecture that this is a case of carbon disulphide poisoning. It is well known that in carbon disulphide poisoning polyneuritis is often present, particularly in the muscles of the leg and chest, without degeneration or paralysis. These neuritic symptoms are almost always accompanied, in chronic poisonings, by a condition simulating inebriation which increases toward evening, with general irritability, loss of appetite, and intestinal disturbances, but with entire absence of sensory disorders. We commonly find, however, in mere carbon disulphide poisoning a tremor of the outspread fingers quite unlike this, while the very rapid, exceedingly fine lateral trembling, with exaggerated intensity at the beginning of a voluntary movement, is almost pathognomonic of mercury poisoning. (Pieraccini, Zangger.) In our case the patient's salivation and traces of mercury in the urine furnished infallible clues. Inquiry as to the labor conditions in this case elicited the fact that the workman had to handle a mixture of carbon disulphide, lead, and mercury compounds which smeared his arms for hours before it could be washed off. So absorption of mixed poisons (carbon disulphide and mercury) was demonstrated. Whether lead did not also play a part could not be determined. At most its presence could not be directly proved, and some of its typical effects (on the blood, mouth, and nervous system) were completely eclipsed by the symptoms of mercury poisoning.

In this case the nervous symptoms alone led to the immediate diagnosis of poisoning by two agents, one of which could be positively identified in the urine.

II. A workman employed as a brass and tin smith, complained of gastric disturbances, vertigo, nausea, headache, and debility, becoming greatly emaciated. Several physicians made a diagnosis of digestive trouble and treated him for gastritis. But as no improvement occurred and no other cause of illness was apparent, some one finally suspected poisoning, "probably by tin." A thorough examination of the man revealed a typical lead line, and hematologically there was marked anemia with basophile erythrocytes. Lead was found in the urine, and the man was certainly suffering from plumbism. But besides this, the man had light brown spots on the fingers, and his mustache and beard were discolored with a yellowish brown pigment. These signs led to the presumption of exposure to nitric acid and nitrous fumes. In workmen exposed to such fumes it is usual to find this faint discoloration of the beard combined with intense anemia, pallor, and chronic bronchial catarrh. Analysis of the situation showed

¹ Zentralblatt für Gewerbehygiene, June, 1919, p. 104.

² Idem, pp. 104, 105.

that the man came into contact not only with the two poisons indicated by the symptoms, but with six or seven more. It is noteworthy that all these other poisons left no specific symptoms by which they could be identified. They were in fact obscured and submerged by the predominant symptoms of indigestion and grave anemia.

III. A workman had to pour a large quantity of anilin oil into a receptacle and mix hydrochloric acid with it. Hence arose a dense cloud of anilin hydrochloride. He used diazo compounds also with materials which may be injurious to health, among them the nitrites. After a while the man became ill with violent headache and vertigo, followed by dyspnea and persistent coryza with sore throat, nausea, and obstinate enteritis. At intervals he had attacks of profuse perspiration. Finally a fine eruption broke out over his entire body; he noticed that there was always much water in his mouth, and that his teeth became rough and crumbled away in small spicules.

On examination about three months after the beginning of his illness, the man had a sallow complexion, pale mucous membranes, but no disturbances of vision, though when nauseated his sight grew dim. No organic cause of the nausea and gastric symptoms could be ascertained. All reflexes were present, varying somewhat, but within the normal limits. Blood condition: Leukopenia, eosinophilia.

That the workman had been exposed to acid fumes was highly probable, for he exhibited the well-nigh pathognomonic sign of friability of the front teeth. (Kulmert and Boppert.) Such splintering deformities of the teeth are demonstrable for a long time. If one has inhaled hydrochloric acid fumes, he has certainly absorbed some anilin also. The blood condition shows a picture such as one finds after the action of benzol derivatives and their poisonous homologues like anilin (polychromasia and diminution of leucocytes), so that the eosinophilia is probably to be interpreted as a sign of a general condition of irritability. Concerning the effect of nitrites in this case nothing can be positively affirmed. But Heingeling declares that the nitrite worker often suffers the loss of his front teeth.

The cephalic congestion and the occurrence of perspiration are to be regarded as incidental effects of nitrites upon the nerves. Possibly, too, the eruption is traceable to the same source, for typical cases of nitrite poisoning are known in which, along with the general symptoms, roseola-like eruptions have been observed. (Harnack.) It is interesting to learn that this man was for a long time considered under a mistaken diagnosis as syphilitic, on account of this eruption. No other diseases are nowadays so frequently—indeed so uniformly—misunderstood in a high percentage of instances as the mixed poisonings.

Difficulties of Diagnosis.

MUELLER has observed a series of mixed poisonings in which the diagnosis of two or several poisons could be determined by the symptoms; but in many other cases it could be arrived at only by exclusion, and under the most painstaking scrutiny of the situation (grouping of cases, recurrence under like conditions, acute illness without fever).

The following points indicate the difficulties of diagnosis:

1. The human body is limited in its reactions.
2. The clinical pictures are often masked by acute illnesses of a different etiology.

3. Individual differences: Pernicious influences act upon a body that has definite and altogether individual antecedents.

It is well known that a cell or an organ reacts to external stimulus by irritation or paralysis, and that the form of reaction depends on the intensity of the stimulation. So an irritant action superadded to a paralyzing injury will not lessen the paralysis but increase it. If, now, another injury occurs which in and of itself is merely irritating, the total effect will be intensified paralysis. In this way the cumulative effect of several slight irritations is paralyzing, since the system reacts to a succession of minor injuries as if they were a single severe injury.

This is true in general, and in particular, also, of mixed poisonings. For example, vomiting is a symptom of ambiguous import. If we would enumerate all its causes, we must begin with the poisons which directly affect the vomiting center in the oblongata; then cause to pass in review all impressions made on the organism acting indirectly by way of the reflexes; and finally include the anatomico-pathologic changes which act as secondary stimuli to that center.

By analogy there exist many other general symptoms like anemia, debility, emaciation, etc., and especially the heightened nerve reflexes, causing instability and irritability, which so often sail under the common flag of nervousness, hysteria, etc. These are mere signs that the body is reacting to injurious influences that have no specific character. Chemical effects especially belong wholly in the category of ordinary diseases. Curschmann says:

Poisonings are general diseases occasioned by specific causes. A great variety of symptoms may be produced by absorption of poison, as well as by other etiological agents. Even the symptoms of specific poisoning are so completely hidden in the mass of diverse toxic effects that they are scarcely perceptible; hence, in many cases, one must be satisfied if he can clinically establish a general diagnosis of probable poisoning.

It is not to be wondered at that the organism under the influence of a mixture of poisonous gases responds simply by collapse or suffocation on the one hand, or by inebriation and confusion of ideas on the other. In either case, the several component poisons may, of course, play an important rôle, but their specific effect is merged in the general effect. The typical is lost. (Compare the poisonings by modern war gases.) Naturally, we find similar conditions in chronic poisonings which, according to Lewin, are nothing else than the cumulative total of single, small, acute effects.

A misleading clue, conducting to an erroneous or incomplete diagnosis, is the fact that mixed poisons seem to have a selective though somewhat erratic action on different organs, producing a diversity of symptoms. As a result of exposure one man may suffer solely from indigestion and nausea, others subject to the same conditions have bronchial catarrh.

In Switzerland the law discriminates between the effects of poisoning and the effects of infection.¹

Other circumstances may cloud the issue. Fatigue, infections, diabetes, and arteriosclerosis may combine and shed on the clinical picture refracted lights which distort the vision and render the diagnosis problematical. Or alcoholism may complicate the situation. Every physician divides his patients into two classes, the alcoholics and the nonalcoholics; for experience teaches how much the treatment and prognosis, as well as the effects of medicine, are determined by chronic alcohol poisoning.

Importance of Alcohol in Industrial Poisoning.

ACCORDING to Mueller, the importance of alcohol in industrial poisoning may be regarded from three points of view:

1. The purely physico-chemical action: On individual cells the alcohol acts as a solvent of fats on the one hand, and, on the other, through pronounced changes in surface tension of watery solutions, it at the same time facilitates the penetration and action of other extraneous substances which are present.

2. Functional disturbances: By its paralyzing influence on all vital reactions it reduces the normal resistance of the system.

3. Anatomical changes as a result of irreversible processes: (Circulatory and nervous system, the liver, the kidneys, the internal secretions, etc.)²

It is because of the well-known injurious effects of alcoholic beverages that in many industries, especially where lead, arsenic, anilin, and mercury are employed, the consumption of alcohol is expressly forbidden.

Friedländer and Moor characterize alcohol as "the deadly enemy" of anilin workers, and Pieraccini makes a similar observation concerning its pernicious influence upon the health of those who handle mercury.

Alcohol is never used in food products unless in mixtures with other ingredients. But aromatic essences are dissolved in alcohol that is often adulterated with fusel oil and amyl or methyl alcohol. The French absinth and all essence-flavored beverages of like character are much more toxic than alcohol itself.

To the alcohol addict traumatism is peculiarly dangerous. In England many cases of pneumonia are known to be occasioned by trivial injuries of any kind. The main cause of such attacks is attributable to the methyl alcohol used in schnapps.

In some factories female employees are said to induce a condition of intoxication by inhaling the vapor of ether, benzine, and benzol,

¹ Art. 19 des Schweiz. Unfallversicherungsgesetzes.

² Zentralblatt für Gewerbehygiene, July, 1919, p. 114.

or by rubbing carbon disulphide into the skin, or by eating sweet nitrous substances, by which practices severe chronic poisonings are produced.

In the *Zentralblatt* for July Mueller recites in detail the histories of many mixed poisoning cases which are deserving of analytical study by all physicians whose duties require them to treat obscure or ill-defined occupational diseases. The effects of carbon monoxide, arsenic, lead, phosphoreted hydrogen, acetylene, benzine, mercury, sulphureted hydrogen, etc., singly and in various combinations, are fully discussed in these clinical records, together with the complex syndrome of symptoms.

The increasing use of substitute raw materials and the adoption of new manufacturing processes in the industries are innovations which demand and deserve impartial consideration. It is no longer possible to assume that an industry which was formerly "safe" will remain so; and it is a fatal mistake for the physician to ignore the possibility of poisoning because a certain manufacturer, for example, in 1912 made use of none of the materials designated as dangerous to health in Sommerfeld and Fischer's "List of Industrial Poisons." Owing to the introduction of substitute products and the change of processes necessitated by the lack of the usual raw materials, new situations are constantly arising and new dangers are incurred.

Mueller emphasizes the fact that there has been a notable increase in the number of mixed poisonings coincidently with the development of modern technical processes. He assigns as the chief reasons for this increase:

1. The extensive use in various industries of materials which endanger the health by their chronic effects.

2. Impurities: The processes are seldom executed with chemically pure materials. (In fact, there is now no possibility of choice.)

3. Supervision and execution of many wholly diverse and variable industrial processes by the same workman. Complete ignorance of the dangers inherent in the materials used on the part of both workman and proprietor.

The dangers increase in the small shops and temporary factories especially, where even the most primitive means of protection are wanting. These places are not subject to factory inspection laws, and live in isolation by deceit and fraud.

4. Frequent change of methods and processes:

- (a) By the compulsion of competition.

- (b) Since the war in particular, through modification of the finished products, so that a characterization of the industry according to its specific chemical hazard is no longer feasible. Industries which yesterday were free from risk may be very dangerous to-day, though the changes in the processes are not generally known outside of the business. They are kept secret in order to avoid competition.¹

¹ *Lentralblatt für Gewerbehygiene*, August, 1919, p. 142

Difficulties in the recognition of mixed poisonings are occasioned by—

1. The atypical clinical picture. Experiment with mixed poisons has shown that wholly new, peculiar reactions may result from combinations of poisons acting together. Especially is it true that the effects of single substances are seldom proportionately evident; on the contrary, potentized action is to be expected. By the formation of new chemical substances changes take place in the chemical and physical conditions that can not be anticipated on account of the extraordinarily complex proportions in which the toxic effect enters the system.

2. Limited possibilities of reaction of the human organism. There are great individual differences. Complication with diseases of a nontoxic character (principally infectious) which may modify and mask the poisoning symptoms.

3. The difficulty of investigating the environment. The demands upon the physician's knowledge of chemical and technical relations are often very great and require special concentration of attention. On account of the rapid evolution of modern technique, it is very hard to secure a comprehensive view of the dangers in the several industries. Trade secrets and opposition of the management very often prevent a thorough analysis of the situation.

4. Complete disorientation of the workman, and very frequently of the business manager, also, by means of which the investigating expert is put on a false scent.

In view of the importance of a correct knowledge of mixed poisons the following measures are recommended:

1. Extension of prophylactic measures. It is a duty to call attention to threatening dangers in order that protection against them may be provided by the State. For reasons already specified, a modern industry encounters great dangers in connection with mixed poisonings. As a rule, it is impossible to discover existing risks except by an analysis of the injurious effects resulting from the employment.

2. By legislation concerning accidents the Government and the law should require the physician to execute these diagnostic tasks whenever possible in order to avoid inequities in the administration of the law.¹

Recommendations Concerning the Manufacture and Use of Wood Alcohol.

WITH a view of securing more specific and uniform regulations for the use of wood alcohol throughout the country, the National Committee for the Prevention of Blindness, with the cooperation of the Safety Institute of America and the National Safety Council, has been preparing recommendations which would be applicable and fair to the various lines of manufacture in which wood alcohol is used, and which would, at the same time, protect the public from misuse of the poison. These recommendations are

¹ Zentralblatt für Gewerbehygiene, August, 1919, p. 143.

published in a recent issue of *Safety*,¹ in an article by George L. Berry, field secretary of the National Committee for the Prevention of Blindness, who takes advantage of the publicity recently given by the press of the country to cases of poisoning and blindness from drinking wood alcohol, to emphasize the special industrial hazards concerned in its use and to ask for suggestions toward the perfection of the code of regulations. It is stated that "recommendations are especially sought which will develop means of securing proper ventilation for the worker, and will be just in their requirements so far as manufacturers are concerned. It must be determined, therefore, as to where the danger point is reached when considering the ratio of evaporation to the cubic foot air content of a workroom during a given period, say, an 8-hour work day."

The recommendations of the committee follow closely those made some time ago by the department of labor of the State of New York, which appear in Bulletin No. 86 of the New York State Industrial Commission.² Mr. Berry prepares the way for a thorough appreciation of these recommendations by a concise account of the dangers resulting from the use of wood alcohol, its manufacture, the commercial and industrial purposes which it serves, and the laws governing its use. He says:

The harmful physiologic action of wood alcohol may be induced by breathing its fumes, by taking it internally, or by absorption through the mucous membranes of the body. Its effect is usually noticeable very shortly after exposure, although this does not necessarily follow. It usually acts as an acute poison. As before stated, vision may become impaired, total blindness occur, or death itself result. One investigator has recorded more than 1,000 casualties which have occurred during the past 20 years due to the use of this poison. It appears, however, that there are some persons who are practically immune to any toxic effect from it.

The wood alcohol used in the United States is obtained chiefly from the destructive distillation of wood; hard wood, birch, beech, maple, oak, elm, and alder being best for the purpose. * * * After distillation and refinement the final product thus obtained is a commercial wood alcohol, usually sold at 95 per cent strength by Tralles' alcoholometer. It contains from 10 per cent to 20 per cent acetone and varying proportions of other organic impurities.

A law was enacted by Congress in 1906, permitting the use of a tax-free domestic alcohol for industrial purposes for which the high cost of grain alcohol was prohibitive. The law requires that the denaturing shall occur "in the presence and under the direction of an authorized Government officer, with methyl alcohol or other denaturing material or materials or admixtures of the same which will destroy its character as a beverage and render it unfit for liquid

¹ Hazards in the manufacture and use of wood alcohol, by Gordon L. Berry. In *Safety*, Sept.-Oct., 1919, pp. 161-170.

² This bulletin was summarized in an article in the *MONTHLY REVIEW* for May, 1918, pp. 252-254.

medicinal purposes." In addition to the denaturing process, pharmacists are permitted to denature alcohol in small quantities and to sell this for nonbeverage purposes, each container to bear a "poison" label.

Uses of Wood Alcohol.

IN THE arts and crafts wood alcohol is used in the making of hats, artificial flowers, incandescent mantles, and other articles. It is used as a solvent for shellacs, varnishes, and finishes used in the manufacture of pencils, rattan goods, toys, passenger coaches, carriages, furniture, pianos, organs, and picture molding, and in the manufacture of airplanes. As a solvent for lacquers and enamels it is used in the manufacture of brass beds, hardware, lighting fixtures, patent leather shoes, and leather clothing.

In the chemical industries wood alcohol is used primarily as a solvent for fats, volatile oils, camphor, resins, gums, varnishes, stains, shellacs, alkalies, and various salts, and in the manufacture of celluloid; also as an extractive in the manufacture of smokeless powder, fulminate of mercury, and other explosives, and as a reagent for the detection of salicylic acid, the determination of boric acid, the preparation of grape sugar, and as a substitute for ethyl (grain) alcohol for other purposes.

In pharmaceutical and medicinal preparations it is used as an extractive; it is substituted for ethyl alcohol in washes, tinctures, liniments, patent medicines, extracts and essences, such as Jamaica ginger, lemon extract, witch-hazel, bay rum, and numerous cosmetic preparations; and it is used in making the artificial oil of wintergreen, gallicin, methylal, methylene-blue, and methylene chloride.

It is also used to some extent as a fuel, as an illuminant, and as a cleaning fluid.

For many of these purposes denatured alcohol may be used with equal results. It is as cheap, if not cheaper, than methyl alcohol, and, while not always free from the dangerous qualities (dependent upon the nature of the denaturing agent), cases of poisoning from it have been exceedingly rare. The only advantage possessed by the wood alcohol over the denatured in manufacturing seems to be that it is claimed by some manufacturers to have better solvent and drying qualities.

Following are the regulations suggested by the National Committee for the Prevention of Blindness for the uniform control of the use of wood alcohol:

1. Definition: By the term "wood alcohol" is meant that substance whose composition, according to chemical nomenclature, is methyl hydrate, CH_3OH , whether pure or containing other substances as impurities, and is intended

to include either the crude or refined product under or by whatever name or trade-mark the same may be called or known.

2. Any inclosure in which processes are conducted where workmen are thereby exposed to the fumes of wood alcohol to the extent of one part per 10,000 volumes of air shall be isolated in such a manner that these fumes shall not enter other workplaces occupied by employees not immediately concerned with the process.

3. When the nature of the operation will permit, the same shall be carried on under a hood or other partial inclosure leading into an exhaust whereby the wood alcohol fumes shall be removed without reaching the operator.

4. In the case of workplaces where the fumes of wood alcohol in the general atmosphere might prove deleterious to the health of workers, natural or mechanical ventilation shall obtain providing for the exhaust of contaminated air at the rate of not less than 75 cubic feet of air per minute per employee, and likewise providing a complete change of air throughout the workplace every seven and a half minutes or oftener.¹

5. In processes involving the use of wood alcohol in small rooms, tanks, vats, and the like, where adequate general ventilation can not be provided, employees shall work on short shifts of from 20 minutes to not exceeding two hours in length, and shall be equipped with either an oxygen respiratory apparatus, a helmet connected by means of hose to fresh outside air supply, or a satisfactory chemical absorbent helmet. Where workers are dependent upon fresh air supplied from without the inclosure by means of hose connection, they shall in all cases be provided with a life line leading to the outside, and be attended by a fellow operator.

6. All jugs, bottles, cans, barrels, or other receptacles in which wood alcohol is stored shall be labeled as follows:

(Skull and Crossbones Represented)

Poison

Wood Alcohol

May cause blindness or death
if swallowed or inhaled

All containers of this nature shall be kept corked or properly covered when not in use.

7. Where wood alcohol is used by employees in processes which require that the hands of the operators come in continuous direct contact with this material, impervious gloves shall be supplied by the proprietors of factories where such processes are conducted.

8. Whenever it is necessary to enter an inclosure, tank, or still in which vapors of wood alcohol are present, an oxygen helmet or other approved respiratory device, as mentioned in section 5, shall be provided by the proprietors and worn by the person obliged to enter such inclosure, tank, or still.

9. Whenever wood alcohol is used or manufactured in the process as an incident of the business carried on, a printed sign shall be kept posted in all such workrooms, calling attention to the dangerous nature of wood alcohol.

¹ Take, for example, a room 10 feet square with ceiling 10 feet from floor. We have here 1,000 cubic feet of air to deal with. Four workers are engaged herein. For each of these workers 75 cubic feet of air per minute is provided, making a total of 300 cubic feet per minute. In consequence of this, the entire air content of the room would be changed every three and a third minutes. In a workplace 40 by 40 by 10 (16,000 cubic feet), with the same number of workers and the intake of air at the same rate of 75 cubic feet per minute, it would require 53 minutes to effect a complete change of air in the workroom, thus necessitating a readjustment of the intake.

This sign shall be prepared by the department of labor of the State industrial commission for free distribution.

10. While not required in plants where alcohol is manufactured, it is recommended that a runboard or walk shall be provided in each kiln when the temperature of the acetate or lime being dried is such as to make it uncomfortable for the operators to walk thereon. The use of wooden clogs in such work proves very satisfactory when the structural nature of the kiln is such as to prevent a satisfactory runboard or walk being provided.

Qualifications of Industrial Physicians.

PROBABLY the greatest opportunity for the promotion of the public health has arisen through the rapid development in industry of medical departments—manned as these departments should be by medical men giving their full time and thought to the conservation of human lives,” says Dr. C. E. Ford in a paper on The coordination of industrial and community health activities, which was read before the health section of the eighth annual congress of the National Safety Council, held in Cleveland in October, 1919.¹ Dr. Ford then reviews the relationship of the public health department, the medical profession, and the public, and says:

The closest possible relation should exist between the private or industrial physician and the public health official. Public-health departments heretofore have been limited in their relations with individuals for the purpose of teaching personal hygiene. The industrial health department can be made the new and strong arm of the public health department in bringing about precaution in matters of health. Morbidity statistics not now available may be secured, as well as organized assistance in time of epidemic.

The demand for this sort of service by the far-seeing executive, unappreciative of the necessary qualifications of a medical director capable of undertaking the responsibility, has led many medical men, the recent graduate, the unsuccessful or moderately so, into the field of industrial medicine; but until qualified men are created by university training or long and varied experience, the cause of industrial medicine, and in turn of industry itself, will not obtain the largest measure of benefit. It no longer suffices for an industrial organization of any size to employ a part-time physician who utilizes his job to pay office rent or automobile upkeep. The physician who considers accident work or casualty surgery as a mere “pot boiler” or “stop gap” for a period of financial stress will hardly prove ornamental to his profession.

To meet the present-day requirement of a medical director it seems that the following qualifications, in addition to a medical degree, are essential:

At least five years of general practice, in that a knowledge of man and his foibles may be acquired. * * *

The industrial physician should have a knowledge of practice, not necessarily profound, of the fundamentals of industrial relations and these include applied preventative medicine, medical and psychopathic medical investigation, recreation, accident prevention, and the methods leading thereto.

He should have knowledge of the special problems relating to the employment of women and children; some knowledge of pensions and insurance, in-

¹ The coordination of industrial and community health activities, by C. E. Ford. In *Journal of Industrial Hygiene*, New York, December, 1919, pp. 402-407.

cluding liability, group and social; some knowledge of plant organization, which is likely to prove effective in dealing with the problems of labor.

He should have knowledge of employment methods; some notion of job analysis, physical and mental tests, to determine the fitness of applicants; knowledge of race problems, knowledge of industrial training, apprenticeship, continuation schools for training in particular jobs; and at least some knowledge in relation to the cost of living according to local standards.

He should have knowledge of the hours of work in relation to fatigue and output; knowledge of shift systems, rest periods, regularity, absenteeism, etc.

He should have at least a superficial knowledge of the security and continuity of employment in slack seasons, while convalescing from accident or disease, in case of labor-saving improvements, as well as with the advent of old age.

He should have a general knowledge of physical working conditions, safeguards, disagreeable gases and dusts; heating, lighting, ventilation, locker rooms, wash rooms, rest rooms, restaurants, hospitals, laundries, toilets, showers, plant beautification, drinking water. Of course he should be responsible for the physical examination of applicants and the periodic reexamination of employees, as well as the medical attention to families of employees when such is supplied.

He should have very definite knowledge of housing, transportation, recreational and educational facilities; the transfer and replacement of misfits, or as has been said "fitting the square peg to the round hole."

He should be familiar with the follow-up work, especially among new employees and with the injured; the replacement of injured and crippled employees.

He should have at least some knowledge of the athletic and social activities, company stores, commissaries, the type of house suitable for economic administration and housing problems generally.

He should be familiar with labor turnover and its cost; designs and data for the construction and operation of hospitals, lunch rooms, neighborhood and community houses; general education and Americanization, together with a knowledge of broad methods of raising the standard of employees' living conditions and ideals.

Coordination of Federal, State, and Local Agencies to Promote Industrial Hygiene.

THE United States Public Health Service has all the power that may constitutionally be given to a Federal health agency; it has also a distinct industrial health program; and what the country needs for the promotion of industrial hygiene is not extension of Federal authority, but health education of the people in order to secure good financial support to what exists, according to a statement by Dr. Schereschewsky, assistant surgeon-general, United States Public Health Service, in his address before the section on industrial hygiene of the American Public Health Association, at New Orleans, October 28, 1919.¹

¹ Need and method of coordinating Federal, State, and local health agencies in promoting industrial hygiene, by J. W. Schereschewsky. In *American Journal of Public Health*, Boston, December, 1919, pp. 937-942.

The paper begins by calling attention to the lesson of the war in the rejection of 34 per cent of males of military age because of physical defects and diseases, and to the further fact that, as the average age of industrial workers is higher than that of the population group examined for the draft and the physical impairments tend to increase with age, it is to be expected that the number of physical impairments in the industrial group is higher than it was among those examined for the draft. The paper also refers to the introduction of new health hazards into industrial life along with the development of new industries, such as the dye industry. It emphasizes the better concept of the value of the individual to the Nation which the period of reconstruction has brought, and the fuller realization of the "utter folly of permitting needlessly unhealthful conditions to sap the man power of the country, to relegate the individual to the scrap heap at a time in life when he should still have many productive years before him."

The need is, therefore, imperative for a constructive national policy for the better production and conservation of industrial health. What we must aim at is the application of the principles of public health science to the field of industry so as ultimately to secure for all workers practically the same measure of health protection no matter in what part of the country they live. It is evident that, in attaining this end, Federal, State, and local health agencies must play an interlocking and coordinated part in improving health conditions, so that overlapping may be prevented, no power usurped, and yet each governmental agency perform its full duty.

Dr. Schereschewsky then discusses briefly the possibilities of Federal activities in connection with State and local governmental agencies. Existing health powers of the Federal Government, which under constitutional limitations are investigative, advisory, cooperative, and, to a certain extent—not fully defined—regulatory, are in main exercised through the Public Health Service, although other Federal bureaus, such as the Bureau of Chemistry in the Department of Agriculture, the Children's Bureau and the Bureau of Labor Statistics in the Department of Labor, have activities more or less related to the public health.

Under these powers the Public Health Service is authorized (a) to investigate any and all disease-producing conditions; (b) prevent the spread of disease through interstate channels; (c) prevent the introduction of disease into the country from without; (d) cooperate with and aid State and local authorities in carrying out health measures; (e) disseminate information to the public.

With these powers the Public Health Service may perform all functions for improving industrial health which were specified in the program to meet after-the-war needs proposed by the Public Health Service and presented to Congress by the Secretary of the Treasury

with an urgent appeal to provide the funds for carrying it out.¹ In this connection Dr. Schereschewsky emphasizes that "what we need is not so much an extension of Federal authority in health matters as the development of a sense of responsibility for good health conditions in the people of the State and locality. It is the development of this sense of responsibility which will enable the Federal Government to play its really powerful and useful part in improving health conditions generally." He says that the "only limitations on its activities are constitutional limitations and the extent of the appropriations granted by Congress," and expresses the opinion that if in the future public opinion demands an extension of its powers of regulation, either a broader interpretation of the constitutional powers or such constitutional amendments as may be needed may be expected.

The Public Health Service Program.

DR. SCHERESCHEWSKY discusses briefly the following features of the Public Health Service program: Health surveys of industries; Industrial morbidity reporting; Adequate systems of medical and surgical supervision of industrial workers; Establishment of minimum health standards; Improvement of the sanitation of industrial communities; and Civil industrial establishments owned and operated by the Federal Government. Regarding the first, he says, "it is not sufficient to study an industry locally. Surveys must be extended to cover all typical geographical locations of the industry under consideration in order to determine the differences, if any, of its essential occupational hazards, because of variations in location, type of management, provisions for health protection, type and degree of local health organization and the like." New industries which have been established as a result of the war and which will become permanent features in our industrial life must also be studied.

What the Federal health agency may best do in connection with securing adequate systems of medical and surgical supervision of industrial workers is to "study and standardize such systems, outlining the best methods, and creating a demand for the qualified personnel necessary for carrying these into effect. States may help, by exercising their police power, in framing regulations for such services, and in cooperating with industrial communities in establishing industrial clinics."

In the establishment of minimum health standards, the author thinks that "much research is still required to formulate practicable

¹ This program was published in the MONTHLY LABOR REVIEW for October, 1919, p. 241.

standards for existing industries, and to keep pace with the introduction of new industries and new processes."

Attention is called to the highly satisfactory results which have followed the cooperation of the Public Health Service with State and local health authorities in improving health conditions in rural districts by building up local health organizations, and the belief is expressed that "a similar system applied to industrial communities, in cooperation with States, will aid greatly in improving the insanitary conditions all too prevalent in many of our industrial centers. Moreover, the cooperation of the Federal Government in such enterprises is abundantly justified because the benefits reaped are not solely enjoyed by the community but by the Nation as a whole."

Such then is the program of the United States Public Health Service for the improvement of industrial health. We have seen that this consists essentially in investigation, leadership, advice, education, coordination of effort and cooperation. The intention is to supplement, not supplant, State and local government. The authority under law to play this important part is already in existence; all that is needed is money and the acquisition and training of the necessary personnel.

There is, at present, in the States and communities a great need for the coordination of their own health activities, so far as the improvement of industrial health is concerned. While general health functions are exercised by State health departments, and in communities by local health departments, supervision over industrial health is exercised by State industrial commissions, State departments of labor or State departments of factory inspection. In local health organizations little or no provision is made for the improvement of working conditions. There is great need for change and improvement here.

Since the public exercises, as a rule, its police and regulatory powers through the State machinery, the pressing need, so far as States and communities are concerned, is to improve and coordinate their organizations to this end. The program of the Public Health Service, if carried out in the manner discussed, will provide a basic knowledge of conditions requiring remedy, and furnish minimum health standards. If States and communities assume their share of the responsibility, they will provide the funds and machinery to put these standards into effect.

In this manner, so far as geographically practicable, uniform working conditions and effective means for the conservation of industrial health will prevail. Yet we must keep ever in mind that the purpose of any health organization, Federal, State, or local, is not to multiply upon the statute books unnecessary laws, nor to develop political organizations, but to become administrative agents of the public purpose, now approaching realization, to translate into deeds the newly developing sense of responsibility for local health conditions, to help realize, so far as possible, uniform health conditions, and a favorable environment for the growth and development of the present and future generations.

Industrial Dermatoses to Be Investigated by National Safety Council.

AN INVESTIGATION of industrial dermatoses has been undertaken by a special committee of the health service section of the National Safety Council, according to a statement in *Hospital Management* for December.¹ This committee is composed of Dr. Carey P. McCord, director, department of industrial medicine and public health, University of Cincinnati; Dr. C. A. Lauffer, medical director, Westinghouse Electric and Manufacturing Co.; and Dr. C. F. N. Schram, medical director, Fairbanks, Morse & Co. A questionnaire asking for information on the subject has been sent to members of the council. In connection with the questionnaire it is stated that skin diseases of various types are prevalent among workers and that in many instances these conditions result from the manufacturing procedures in which the workers are engaged; that very little information is available as to the frequency of these diseases, the varieties and severity of them, the industrial processes that produce them, and the best methods of protection against, and treatment of, them; and that for this reason the committee has been appointed to compile all obtainable information on the subject and to make recommendations concerning the prevention and control of industrial skin conditions.

Under "industrial dermatoses" the committee includes any noteworthy abnormality of the skin (hair or nails, etc.) that originated incident to industrial working conditions, or was aggravated by such conditions. This, it is stated, will include such lesions as rashes, eruptions, inflammatory processes, hypertrophies (thickening or hardening of the skin) from hard use, such as on the hands or on the lips, low grade chronic skin diseases from long exposure to peculiar light rays or from certain heat processes, skin diseases from constant friction or pressure, loss of hair, etc. Properly speaking, most burns are likely to involve the skin, but inasmuch as the common types of burns from fire have been so well studied this committee will not include this particular skin lesion. Such burns as chemical burns, X-ray or radium burns, etc., are, however, of especial interest. Three instances of industrial dermatoses are mentioned in order to direct attention to other types of work which, upon investigation, may yield helpful information:

1. In industrial plants where wood is stained in imitation of mahogany, where certain color pigments and dyes are manufactured, in which anilin oil or its derivatives are used or manufactured, workmen very often present a skin affection which has been attributed to the poisonous action of this chemical. In

¹ Industrial dermatoses to be investigated. In *Hospital Management*, Chicago, December, 1919, pp. 54-56.

similar chemical manufacturing processes or in munition plants where various compounds are used, such as picric acid, the skin of the forearms sometimes shows an eruption of small pimples with a bronzing and some drying or roughness of the skin.

2. Among men working in tanneries, especially those handling the hides in the vats which contain chemicals, such as lime, acid, or dichromate, an eczema is often observed. This is found particularly on the arms and hands and often pus is formed beneath the skin. Sometimes small ulcers are formed.

3. In the shoe industry in various processes the shoe is pressed against the abdomen for steadying. This pressure for several hundred shoes per day, over long periods of time, results in an hypertrophy of the skin over the area pressed upon. This hardened thickened skin often becomes the site of low-grade chronic inflammatory skin disease. Such conditions are readily preventable.

The following list of industries and trade processes in which cases of industrial skin diseases are known to have developed is given:

Industry.	Trade processes.
Aniline dyes.	
Automobile and parts	Machine shopping (oil).
Bakelite.	
Boots and shoes	Closing and blackening.
Boxes, fancy and paper	Paper box making (glue).
Brass and bronze products	Acid dipping.
Clothing and textiles	Cleaning, dyeing.
Cordage, twine, jute	Combing, stranding (oil).
Dry cleaning and dyeing	Dyeing and cleaning.
Electric apparatus, etc	Pitching dry batteries.
Enameling and japanning	Enameling.
Foundry and machine shop products	Welding, electroplating.
Furniture and cabinets	Polishing and veneering.
Glass manufacturing	Mixing ingredients (arsenic); decorating (benzine).
Halowax.	
Iron and steel mills	Galvanizing (sal ammoniac).
Lime manufacturing	Grinding, slaking.
Marble and stone	Surfacing (oxalic acid).
Oil cloth and linoleum	Mixing ingredients.
Paint and varnish manufacturing	Cleaning with benzine, manufacture varnish.
Paper and roofing paper	Sizing with alum.
Rubber goods	Specialty work, making inner tubes, cold cure.
Soap	Handling soap.
Sterotyping and electrotyping	Tending batteries.
Stoves and furnaces	Metal cleaning (naphtha).
Toys and games	Brazing.

It is stated that the list is far from complete and that very little is known as to the methods for quick results in handling these diseases. Manufacturers are asked to help the committee by answering a list of questions, including the following:

General nature of the product of the plant. What particular processes are involved in the manufacturing of the products of your plant?

Do you know of the existence at the present time, or at any time in the past, of any kind of skin disease among the workers in any part of the plant?

Please supply all possible information as to the nature and characteristics of the skin disease observed.

Have you on hand, or can you obtain, "close-up" photographs of these skin diseases? (Please include photographs when returning this questionnaire.)

In what particular manufacturing processes did such conditions arise? Please supply full details.

What percentage of persons in any involved department were affected? Total number affected?

What has been the method of caring for and treating such patients?

What measures have been installed for the elimination of these conditions?

Are the protective measures instituted adequate?

In other plants in which you may have connections, or with which you may be familiar, do you know of the occurrence of any skin disease attributable to working conditions or to trade processes, etc.? If so, please supply all possible information.

What general and specific processes do you believe this committee should investigate as probable prolific sources of dermatoses? This question does not apply to your own plant, but to industry in general.

Please refer us to any papers you may have published on industrial skin diseases, or to any other published work of this nature, with which you may be acquainted.

Please write your own views with reference to industrial dermatoses—prevalence, frequency, causes, methods of treatment, their significance as an industrial medicine problem, etc.

WORKMEN'S COMPENSATION.

Constitutionality of Workmen's Compensation Laws of North Dakota and Tennessee.

North Dakota.

IN SPITE of the fact that the Supreme Court of the United States has placed the stamp of judicial approval on practically every variety of compensation law in force in its five opinions sustaining as many State laws, an unwillingness to regard such legislation as valid still manifests itself. Objection to the North Dakota statute was raised by an employer, who was engaged in the real estate and loan business, having two clerks in his employ engaged in keeping books, making records, and attending to correspondence and similar work.¹ The claim was advanced that the business is in no sense hazardous or dangerous, and that the act of declaring such establishments to be dangerous is a violation of the rules as to classification, and not within the police power of the State.

The statute under consideration defines hazardous employment as any employment in which one or more employees are regularly employed, excepting agricultural and domestic service and common carriers by steam railroads. Contribution to a State fund, in accordance with rates fixed by an administrative bureau on the basis of the degree of hazard of the employment, is compulsory on every employer coming within the act.

Besides the objection to classification, it was contended that the act violated provisions of the State and Federal constitutions as to freedom of contract and the equal privileges and immunities of citizens.

The action was brought through an application for an injunction to restrain and prohibit the workmen's compensation bureau from in any manner enforcing the act. An interesting preliminary question related to the power of the commission to appear in person in its own defense, the attorney general of the State claiming to be the sole legal counsel of the bureau and the only person entitled to appear

¹ State of North Dakota ex rel. Henry Amerland v. John N. Hagan, commissioner of agriculture and labor and ex-officio member of the Workmen's Compensation Bureau. Oct. 25, 1919. 175 Northwestern Reporter, p. 372.

in its behalf. The attorney general filed a motion to dismiss the application on the ground that it alleged no facts sufficient to constitute a cause of action. One of the members of the bureau, himself an attorney, had filed a return seeking to accomplish the same ends by a somewhat different legal process, and the attorney general undertook to have this reply stricken from the records as being an encroachment upon his exclusive prerogative. The court held that, though the attorney general was the proper legal adviser of the various departments of the State Government, he did not thereby become the client as well as attorney so as to exclude such client from taking legal steps in his own behalf.

Taking up the case on its merits, the classification of all employments as hazardous so as to require insurance was found not to be unreasonable but a proper exercise of the police power of the State under its authority to do away with the old common-law principles and substitute therefor a compulsory compensation system adapted to the conditions and opinions in effect at the present time. This conclusion was sustained by a reference to the recent decision by the Supreme Court of the United States in *Arizona Copper Co. v. Hammer* (39 Sup. Ct. 553). The act under consideration expresses the policy of the legislature of the State as expressed by an overwhelming majority. The legislature having thus determined the industry to be hazardous, the court declined to hold that the employees of the petitioner in this case were under no hazard whatever. The contention as to classification was therefore dismissed, while questions of liability without fault and interference with the freedom of contract were disposed of in favor of the law, various decisions of the State courts and the United States Supreme Court being cited. Nothing arbitrary or unreasonable was found to be embodied in the act, nor was there any unconstitutional delegation of judicial power to the administrative bureau. The exclusion of certain classes of employees does not give rise to objection on the ground of unreasonable discrimination and is in accordance with the provisions of many State laws whose validity has been established by courts of last resort. The petition was therefore dismissed and the act sustained against all the contentions raised.

A partial dissenting opinion was prepared by one justice, who would not declare the act wholly void, but would establish reservations, one declaring that the bureau has no right to collect premiums until a schedule of rates has been made and published, which schedule must be just and reasonable; while as to ordinary clerical service and work in hotels and restaurants, it should be found that there is no inherent and material risk, so that no insurance would be required.

Tennessee.

LESS authoritative than the foregoing is the decision of a circuit court judge of Davidson County, Tenn. (*Harrison v. Phillips and Buttorff Mfg. Co.*). A typewritten copy of the opinion in this case sets forth that the plaintiff, Harrison, sued, by his father as next friend, to recover damages for the loss of both hands while working at a cutting machine. The youth was 18 years of age, and alleged inexperience and ignorance of the dangers and also ignorance of the provisions of the workmen's compensation act which had only recently come into operation. Proper allegations were made for a suit for damages, to which the employers replied that they were operating under the compensation law, so that this law constituted the sole method of redress for the injured employee. The constitutionality of the act was thereupon challenged. The court reached the conclusion that the diversity of the laws of other States and the peculiar provisions of the Constitution of Tennessee differentiated the case from any cited by the attorneys; while the absence of any decision by the supreme court of the State left the judge to be guided by his own impression as to the conformity of the law to the constitution of the State.

The statute excludes coal mining from its operation, as well as the employees of the State and its municipalities. However, there is a provision that coal mines may be brought within the act by written notice by the employer, no reference being made to an option on the part of the employee. These provisions were said by Judge Rutherford to be partial and unreciprocal, rendering the act subject to the criticism of being arbitrary and vicious class legislation, and in violation of the constitution. The failure to include coal mines, while including copper mines, phosphate mines, and others of similar hazard, was said to be a classification not based on reason; while the exclusion of public employees deprived them of equal privileges with other employed persons.

Another objection was to the provision relative to medical service, which service the employer is required to furnish and "the injured employee *shall* accept." This mandatory provision as to acceptance by the employee of the medical aid furnished was said to deprive him of his liberty under the constitution of the State, arbitrarily requiring him "to submit to the treatment and take the medicine and remedies furnished by the doctor of the company regardless of the character of his ailment and injury, and regardless of the incompetency or character of the physician or the deadly effect of his medicines and remedies."

It was also held that the establishment of a fixed schedule for maimings and the limitation of the compensation benefits to a maxi-

mum named in the law did not provide "remedy by due course of law." nor were "right and justice administered" thereby, as required by the State constitution. The abolition of trial by jury was also said to be unconstitutional, and the contention that election constituted a legal waiver of this right was rejected by the court on the ground that there was no adequate freedom of choice under the presumptive provisions of the act.

Further objections were noted, the judge citing the decisions of the New York court of appeals and the Kentucky court of appeals holding the original compensation laws of their respective States unconstitutional, and arriving at the conclusion that "the act as a whole is in violation of the Constitution of Tennessee."

No one who has followed carefully the decisions of the Supreme Court of the United States on the subject can fail to recognize that each point made by Judge Rutherford in his opinion has been ruled against by the Supreme Court in so far as its relation to the Federal Constitution and the police power of the State is concerned. There remains, of course, the question of the construction of specific or peculiar provisions of the Constitution of the State of Tennessee, but against this must be placed the great volume of decisions by State supreme courts, covering every section of the country, holding laws of like tenor constitutional. Furthermore, Judge Neil, a judge of the same county, who sat with Judge Rutherford during the hearing of the case above noted, prepared a memorandum expressing his views, which, "after giving it the most thoughtful consideration," are to the effect that the act is constitutional. Judge Neil admitted that there is much authority to sustain Judge Rutherford's view of the case, but expressed his opinion "that the weight of judicial authority was to the contrary." An appeal was taken to the supreme court of the State.

Final Report on Investigation of New York Industrial Commission.

THE final report on the investigation by Mr. J. F. Connor into the management and affairs of the New York Industrial Commission was submitted to the governor November 17, 1919.¹ This report reviews the two interim reports previously submitted, presents much additional data on the operation of the compensation law, including the results of an actuarial investigation of the State

¹ Report of investigation by Jeremiah F. Connor, as commissioner under sec. 8 of the executive law, known as the Moreland Act, in relation to the management and affairs of the State industrial commission. 83 pp. Two interim reports, reviewed in the MONTHLY LABOR REVIEW for June and September, 1919, dealt with direct settlements and with the management of the State insurance fund.

fund made by Mr. Miles M. Dawson, and contains a number of specific recommendations.

Underpayments.

THE investigation brought out several highly significant facts. Among the most important of these was the large number of underpayments of compensation claims on the part of employers and insurance carriers, particularly stock companies and self-insurers. Of 1,000 unselected cases of direct settlements 114 were found to have been underpaid. This underpayment amounted to \$52,279.84, or \$459 per case. The total underpayments on the basis of the 1,000 cases would amount to \$1,400,000 annually. An analysis of the 114 cases shows that the private stock companies and the self-insured employers were especially guilty of this "short-changing" practice. The following table shows the average amount originally paid by direct settlement, and the additional amount awarded after investigation and rehearing, classified by type of insurance.

AVERAGE AMOUNT ORIGINALLY PAID BY DIRECT SETTLEMENT IN 114 COMPENSATION CASES AND AVERAGE ADDITIONAL COMPENSATION AWARDED ON REHEARING.

Type of insurance.	Number of underpaid cases.	Average amount originally paid by direct settlement.	Average additional compensation awarded on rehearing.
Stock insurance companies.....	79	\$114	\$383
Mutual insurance companies.....	6	29	61
Self-insurers.....	29	157	747
Total.....	114	120	459

Mr. Connor's investigation of lump-sum settlements disclosed the same deplorable practice of underpayment. Of 80 selected cases 20 were found to have been underpaid. The total amount originally awarded on the final adjustment of the 20 cases before a deputy commissioner was \$29,618.67. The total amount awarded on rehearing of these cases amounted to \$52,086.97. The claimants in these cases were underpaid, therefore, in the sum of \$22,468.30, an average of \$1,123 per case. The stock insurance companies were again the chief offenders. Claims against the State fund were also found to have been underpaid. In 11 cases in the Buffalo office, in which claimants had been previously awarded a total of \$2,742.14, the commission on rehearing awarded a total of \$9,579.91. The average underpayment was \$622 per case. These underpayments by the State fund were all confined to the special groups, some of which are composed of individual employers. It is evident that the employers in

these special groups are directly interested in keeping down compensation cost.

The report states that since the enactment of the direct settlement provision of the compensation law in 1915 injured workmen in New York have been defrauded out of at least \$5,000,000. Some of the evils found to exist were stated to be due to activities of insurance carriers, some to defects in the statute, and others to a breakdown in administration. All of the underpayments, says the report, have inured to the financial benefit of insurance companies, self-insurers, and others, such as employers having the Wynkoop Service.

Security.

ONE of the stock insurance companies licensed to do business in the State of New York has been taken over for liquidation by the superintendent of insurance. The failure of this company made the employers insured by the company directly liable for the payment of compensation. This caused much delay in the payment of claims, and, in several cases where the employer was irresponsible, made it impossible for the commission to enforce payment of compensation to injured employees or the dependents of deceased employees. The delay has resulted in great hardships. In the case of a mutual insurance company, which withdrew from business, payments of compensation were made in full. The company had ample assets because of its reserves, and the employers could have been assessed if necessary to cover any deficiency.

According to the testimony, more than 15,000 employers have failed to give security for the payment of compensation, although required to insure by the compensation act. Most of these are small employers, and many of them are financially irresponsible. Awards by the commission arising from claims against these employers are often uncollectible.

"Runners."

ONE evil intended to be obviated by the workmen's compensation law was the ambulance-chasing lawyer and the contingent fee under which the injured employee received only a small part of the amounts recovered for personal injuries. According to the report, a system of "runners" has grown up under the administration of the compensation law, resulting in conditions as bad, if not worse, than under the previous system. A large number of persons in New York City, called "runners," are engaged in the business of hunting up claimants and appearing with them before the State industrial commission. This condition is especially prevalent among Italian

claimants and others employed along the water fronts in Greater New York. In many cases, the claimant, acting in concert with the runner and a physician, perpetrates a fraud upon the employer or insurance carrier. Claims for minor injuries are withheld for several months, with the expectation, almost always realized, that, when the case comes on for hearing, an award of compensation will be made to the date of the hearing. This means a larger sum for the claimant, and that is all paid in one sum, resulting in more to divide with the "runner." In some cases, claimants have been known to report accidents of this character against as many as three different employers.

State Fund.

AS REGARDS the investigation of the State fund, the outstanding feature of the report is the unquestioned financial solvency of the fund and the saving of millions of dollars by employers insured in the fund.

Says the report:

The actuarial report, and the evidence produced before me, show that the total saving to the employers insured in the State fund during this period of time, over and above what it would have cost had the same insurance been carried by stock companies, was approximately \$4,000,000.

This also shows that had the employers insured by stock companies placed their insurance with the State fund they would have saved during the same period, by reason of lower expenses and returns in form of dividends, the sum of \$18,000,000. * * *

The investments of the State fund are all of a high class, amply secured, and not in default as to principal or interest.

The State fund is solvent and possessed of unimpaired reserves, at least equal in value to all liabilities, accrued or to accrue, and of surplus sufficient to warrant dividends to all policyholders at the rates provided and to provide for catastrophes, with a margin over to cover against fluctuation in experience. * * *

The management of the State fund has been greatly handicapped through civil service requirements and by reason of the fact that the salaries of all employees are fixed long in advance. Under the budget system the salaries and expenses of the State fund up to July 1, 1921, have already been estimated in detail. This budget system works well in relation to the ordinary administrative departments, but it is a severe handicap to a State insurance fund in competition with other insurance carriers. No business institution can succeed when it has no leeway in the amount it can expend for salaries and expenses, and it seems impossible to make an accurate estimate at this time for the salaries and expenses of an insurance company for the month of June, 1921. For this reason I recommend that the State fund be permitted to pay its expenses from the premium income under limitations to be laid down by the legislature.

Recommendations.

THE following are some of the more important recommendations submitted:

Make it a misdemeanor for anyone to receive a fee in connection with a claim for compensation except in an amount determined by the commission in order to curb the activities of "runners."

Extend the time for filing claims from one year to two years and provide that the time in disability cases shall commence to run from the date of disability instead of from the date of the accident.

Require a panel of physicians to be designated by the commission, utilizing the advice of recognized medical societies, among whom injured workmen may have free choice, with power conferred on the commission to add to, or to remove from, such panel, at their discretion.

Make claims for compensation and death benefits and awards made thereupon preferred over all other claims against, and debts of, insurance companies as well as employers.

Permit the commission to call and require to be paid into a trust fund the present value of awards against all insurance companies.

Require stock companies to set up and maintain reserves to meet the actual liability upon each claim instead of setting up as reserves a percentage of its premiums.

Self-insurers should be required to set up and deposit reserves in the same manner and in the same amount as other insurance carriers.

All employers failing to give security for compensation should be automatically insured in the State fund, and a summary method established for the collection of premiums and penalties for the period during which the insurance attaches.

The compensation law should be extended to cover all employees without regard to the character of the employment.

The amount of compensation and death benefits should be generally increased, particularly as regards limits.

The State fund should be authorized by law to pay expenses directly out of its premium income under such restrictions as may be laid down by the legislature.

Provision should be made for appointment by the governor of an advisory board selected from employers insured in the State fund to take part in its management and to confer upon them extensive powers of review and regulation.

The provisions for pro rata dividends in the State fund should be amended to give the commission power to declare any pay dividends according to the individual experience of each employer.

The payment of future installments in one sum should only be granted after careful investigation, and each case of this character should be passed upon by a member of the State industrial commission.

In disposing of claims against the State fund the employee should be given a hearing in every case in the same manner as regarding claims against other insurance carriers.

The commission should select the specialists employed by the medical division of the compensation bureau by the medical officer of the State insurance fund, and regulate the fees.

All checks issued in payment of claims by the State insurance fund should be mailed to the claimants instead of delivered personally.

An audit of the State fund should be made at least once each year by an outside accountant appointed by the advisory board.

All profit-making institutions, such as the Wynkoop Service and the Wolff Medical Service, should be eliminated from the State fund.

Mr. Baldwin's Reply.

IN A statement to the New York Industrial Commission, copy of which has been furnished the Bureau of Labor Statistics, Mr. F. Spencer Baldwin, former manager of the State fund, reviews the findings and recommendations of Mr. Connor's report. Most of Mr. Baldwin's statements deal with matters already reviewed in the September, 1919, issue of the MONTHLY LABOR REVIEW. Mr. Baldwin favors most of the recommendations, some of which he has long advocated. His concluding comments upon both the findings and recommendations of the report are as follows:

The counsel and actuary declare that "the usefulness of mutuality is demonstrated," and further, that "the most conclusive demonstration of the benefits of mutuality was in the State fund, where the combined losses and expenses for 1918 were only 47 per cent of the premiums computed at insurance company rates." In this connection he expresses the opinion that the solution of all the difficulties in the field of compensation insurance is "to make insurance in the State fund obligatory upon all employers, automatically attaching, and to provide for assessment and collection of premiums by summary process like other taxes."

At this point we come upon a significant hiatus between the findings of the counsel and actuary and the recommendations of the Moreland Act commissioner. The former favors the grant of a monopoly to the State fund and the elimination of all other forms of insurance. The latter makes no recommendation for the exclusion of private profit-making companies, but merely proposes that employers who are not otherwise insured shall be assumed to be insured in the State fund. The Moreland Act commissioner proposes an amendment making all employers failing to give security for compensation automatically insured in the State fund and to establish a summary method for collection of premiums and penalties for the period during which the insurance attaches.

Whatever justification may be urged for such an amendment upon general grounds, it would unquestionably have the effect of embarrassing the State fund by foisting upon it practically uninsurable risks rejected by the private companies. That is, every employer who could not obtain insurance in one of the companies, or who neglected to take out insurance would be a charge upon the State fund with respect to every accident occurring in his establishment. It is inconceivable that the premiums for such risks, even if they were collectible by summary process, would be sufficient to meet the liabilities. The State fund, moreover, would have no opportunity to adjust rates in advance for these risks or to enforce measures of accident prevention, as the insurance would be forced upon the State fund after the occurrence of accidents.

The failure of the Moreland Act commissioner to make any constructive recommendations for the extension of State fund insurance is thoroughly consistent

with the manifest destructive purpose of his investigation. He assails the Wynkoop Service and the Wolf Service as profit-making institutions, although these organizations render efficient service at low cost, and has not a word of criticism for profit making on a large scale by the private insurance companies, and the payment of commissions to brokers and agents without any proportionate return in service rendered.

Recent Reports of Industrial Accident Commissions.

California.

A REDUCTION in the total number of industrial injuries for the year 1918 as compared to 1917 is a feature of the report of the California Industrial Accident Commission for the year ending June 30, 1919, the following preliminary summary of which has been furnished the Bureau by the commission. In the calendar year 1918 there were 104,767 industrial injuries as compared with 109,988 for 1917, a reduction of 5,221. There were, however, 80 more industrial deaths in 1918 than in 1917, as shown by the total for each year; 1918, 706 deaths; 1917, 626 deaths. The permanent injuries for 1918 numbered 2,100, as against 1,942 for 1917. The temporary injuries were 101,961 in 1918, as compared with 107,420 in 1917.

A brief survey of the 706 industrial deaths shows that 59 occurred in the shipyards of California, 40 on the high seas, 38 were electrocutions, and 19 were from improperly guarded gears and cogwheel. There were eight women killed while at work during 1918. The production of motion pictures caused three deaths, and six policemen and two firemen were killed in the discharge of their duties.

A summary of the dependency following the 706 industrial deaths shows that there were 817 total dependents as the result of 364 fatalities; 153 partial dependents were left in 80 fatal cases; in 246 fatal cases there were no dependents, and in 16 fatal cases the degree of dependency was unknown. The average age of the widows was 37.6 years. The age of the dependent children averaged 8.4 years.

Life pensions were awarded in 13 cases of serious and permanent injuries. There were 21,969 injuries that caused a time loss of 11 days or longer. The remaining temporary injuries did not last longer than the 10-day waiting period. There were 8 life pensions awarded in 1917.

The following table shows the number and the different kinds of injuries for the years 1914 to 1918:

NUMBER AND TYPE OF INDUSTRIAL INJURIES IN CALIFORNIA DURING THE YEARS
1914 TO 1918, INCLUSIVE.

Type of injury.	1914	1915	1916	1917	1918
Deaths.....	691	533	657	626	706
Permanent injuries.....	1,292	1,264	1,709	1,942	2,100
Eyes suffering impairment of vision or removal.....	172	175	202	230	251
Arms amputated.....	28	13	20	28	36
Fingers lost.....	872	798	900	904	1,059
Legs or feet lost.....	45	28	26	32	25
Toe amputations.....	54	40	33	34	51

In 1918 there were 8 women workers killed, 2 in 1917, 4 in 1916, 2 in 1915, and 2 in 1914. The average age of the killed during 1918 was 39.9 years and the average wage was \$25.01 a week, as compared to 38.8 years and \$22.26 a week for 1917. Occupational diseases reported in 1918 numbered 445; in 1917, 506; in 1916, 348.

The sum of \$3,953,030 was awarded California's 104,767 injured workers (including the dependents of those killed) during 1918. The sum of \$1,228,617 represents the medical, surgical, and hospital payments. The total of these two sums gives \$5,181,647.

Compensation in California is compulsory, excepting for agricultural employees, household domestic servants, and those employees whose employment is both casual and not in the course of the trade, business, profession, or occupation of the employer. The latter may elect compensation. Acceptances reported for the fiscal year ending June 30, 1919, numbered 1,618. This number, added to 20,689 previously reported, makes the total now on file 22,307.

The commission has issued 189 certificates of consent to self-insure to employers preferring the certificates to policies issued by the insurance carriers. On June 30, 1919, there was on deposit with the State treasurer securities to the amount of \$3,635,000 to protect the 192,994 employees in the service of the 189 employers.

Report of the Compensation Department.

DURING the fiscal year ending June 30, 1919, there were 1,679 contested cases filed with the commission. This total should not be confused with the total number of industrial injuries. The latter number more than 100,000 each year, and out of that total only 1,679 failed, during the 12 months noted, of adjustment between the employers and employees. It was necessary for the commission to decide the issue in the contested cases. Since the first compensation law became effective on September 1, 1911, down to June 30, 1919, 7,784 claims were filed because of controversies.

The commission disposed of 1,506 cases during the year, being 173 cases less than those filed. Compensation was awarded in 1,002 of the 1,506 cases and denied in 292; 78 cases were settled and 134

dismissed. The extent and duration of disability was the cause of 394 cases; whether injury was in course of employment, the cause of 252 cases; dependency, the cause of 168 cases. The willful misconduct of the employer was the issue in 13 cases, and the willful misconduct of the employee in 27 cases. The troublesome issue of hernia appeared in 69 cases.

The influenza epidemic of last winter and the absence of employees of the compensation department in war service were factors in increasing the average time consumed in the decision of cases from 56.6 days in 1917-18 to 67.8 days in 1918-19.

During the last fiscal year applications for writs of review from decisions of the commission were made to the appellate courts in 48 cases. Writs were granted in 33 cases and denied in 15 cases. Of the 33 writs granted the courts affirmed the commission's decisions in 12 cases and annulled 9 awards. Proceedings were settled and dismissed in 2 cases and 10 cases were pending on June 30, 1919. Including decisions upon cases instituted prior to the last fiscal year, 48 decisions were rendered by the courts, and the commission was sustained in 35 cases, or approximately 73 per cent of its decisions taken up on appeal. There are pending before the United States Supreme Court three writs of error from final decisions of the California Supreme Court affirming the commission's awards.

Injunctions were granted by the Superior Courts of San Francisco and Humboldt County restraining the operation of an unsafe elevator and an unsafe boiler.

Rehabilitation of the Permanently Injured.

THE commission's records show that during the last three years there have occurred in California each year an average of 200 fatal accidents where no dependents were left. Under the new rehabilitation act, the sum of \$350 must be paid into the State treasury for each such death for the purpose of providing for "vocational reeducation and rehabilitation of workmen disabled in industry in this State." From this source there will be available approximately \$70,000 a year for the work, which corresponds with that done for disabled soldiers of war by the Federal Government, as well as by the governments of other countries.

Industrial education is claimed to be the solution for these unfortunate men, and it is stated the industries responsible for their condition should bear the cost. The Federal Board for Vocational Education estimates that it will cost about \$1,000 to rehabilitate the average soldier, based on a 12 month's course. California's "general average" is 12 to 14 years older than the average soldier, and it is not believed a course of more than six months is advisable.

State Compensation Insurance Fund.

THE premium income for the first half of 1919 exceeded \$1,500,000, indicating the likelihood of a total volume considerably in excess of \$3,000,000 for the full year. As the total premium income for all carriers is estimated at \$8,000,000, the fund was, on June 30, 1919, doing about 40 per cent of the entire compensation business of California, in competition with a large number of insurance companies and interinsurance exchanges. More than \$1,000,000 have been returned to policy holders in dividends, and over \$1,000,000 have been accumulated as a net surplus for protection against catastrophe. All legal reserves for losses, unearned premiums, and expenses have been set up and maintained.

The fund's total admitted assets on June 30, 1919, were \$3,398,749.35, and the total net surplus, after deducting liabilities, was \$1,100,923.60. There was invested in Government and municipal bonds the sum of \$2,611,993.26.

New York.

THE annual report of the industrial commission of New York for the year ending June 30, 1918,¹ contains as a portion of the matter presented a report of the commissioner in charge of the bureau of workmen's compensation. This is the fourth annual report, and is of particular interest because of the account given of the development of legislation through what may be called an intensive process, by reason of the wide range of experience rapidly accruing in this the principal industrial State of the Union, and also because of the fact that the legislature meets in annual sessions. Although the law was originally drawn with an unusual degree of care, a very considerable number of changes were found to be necessary to carry out without confusion and with certainty the purposes of its proponents. Many additions to the employments enumerated have been made from time to time, the original list of designated hazardous employments being found incomplete. Finally it was decided to make a sort of blanket coverage by declaring the law applicable to all employers not already covered if they should have in their employment four or more "workmen or operatives." No sooner was this amendment brought to a legal interpretation than its effect was found to be nullified by the construction put upon it by the attorney general of the State. The term "workmen or operatives" was said to have a more restricted

¹ New York. Annual report of the Industrial Commission, for the 12 months ended June 30, 1918. Albany, 1919, pp. 99-159.

meaning than the term "employee," used elsewhere in the act, and refers to manual labor only, and not to clerks or those engaged in professional work. This was contrary to the intention of those interested in procuring the amendment, and the recommendation is made that the word "employees" be substituted for "workmen or operators," so as to avoid the implication of a restriction to manual labor. Another amendment defines the term employee to include all the employees of an employer whose principal business is embraced by the act, thus determining the compensation rights of clerks and office employees, concerning whom question had been raised on the ground that they are not exposed to the hazards of the undertaking or business.

Other amendments are referred to, all tending toward liberality or clarity and the simplification of procedure. Notwithstanding these achievements the commissioner in this report recommended some 26 additional changes. One of these asked for a compensation rate of 75 per cent instead of 66 $\frac{2}{3}$ per cent, an analysis showing that at present the law provides compensation not in excess of 50 per cent of the loss to the injured workmen. The upper wage limit should also be increased from \$100 to \$150 per month, and the maximum weekly benefits from \$15 to \$20. A shortening of the waiting time was also recommended. The widest departure of any recommendation was one proposing to make injuries compensable if arising "in the course of employment" only, instead of "out of and in the course of employment." The ordinary rule of interpretation was said to be too narrow, and a broadening of the act was held to be justified on the basis of a "sound social policy and in a generous view of things as they should be." It was pointed out that a recent court decision encouraged a liberal interpretation, which should be incorporated into law.

The bureau maintains offices in New York City, Albany, Syracuse, Rochester, and Buffalo, but more than one-half the cases (28,983 out of 51,508 docketed as occurring during the year covered) are reported to the New York City office. The following brief table shows the principal facts for four years. The period covered by each year is for 12 months ending June 30 of the year named.

NUMBER OF ACCIDENTS AND COMPENSATION CASES, YEAR ENDING JUNE 30,
1915 TO 1918.

Item.	1915	1916	1917	1918
Number of accidents.....	225,391	273,385	313,406	286,971
Number of compensation cases.....	41,667	52,227	60,132	53,012
Death cases only for same time.....	812	1,366	1,570	1,504
Percentage of compensation cases to whole number of accidents.....	18	19	19	18

A statistical analysis of the compensation cases for the four years, 207,038 in number, is to be made by the chief statistician, the opinion being expressed that this is "a sufficiently large number to give very closely all the laws governing accidents, as well as revealing cost."

Following the report of the commissioner is that of the manager of the State insurance fund. The year covered by this report is the calendar year. The table below affords a review of the principal facts connected with this fund for the three years 1916 to 1918.

COMPARATIVE STATEMENT OF BUSINESS OF STATE INSURANCE FUND.

Item.	1916	1917	1918
Number of policyholders.....	9,966	9,984	8,782
Premiums in force.....	\$797,743.31	\$810,576.79	\$940,902.83
Net premiums written.....	\$2,048,128.91	\$2,694,851.17	\$3,332,841.88
Earned premiums.....	\$2,045,925.52	\$2,681,376.01	\$3,282,965.24
Expense incurred.....	\$188,020.08	\$302,796.92	\$246,639.75
Expense ratio to earned premiums.....per cent.	9.2	11.3	7.5
Losses and loss reserve.....	\$1,890,229.34	\$2,448,465.00	\$1,660,471.70
Loss ratio to earned premiums.....per cent.	92.4	91.4	50.5
Dividends allowed.....	\$240,084.74	\$150,420.83	\$220,356.45
Investments.....	\$1,854,642.50	\$2,680,155.00	\$4,184,288.00
Surplus.....	\$253,179.44	\$398,682.22	\$817,210.50

The reduction in the number of policyholders in 1918 is explained in part by the retirement from business of small employers on account of war conditions, and the cancellation of policies for nonpayment of premiums, due to a closer follow-up system. The volume of premiums in force increased, however, indicating an actual growth of the fund.

Besides the premium income of three and one-third million dollars there was an interest income for the year of \$156,309.25.

Disbursements of benefits for the year were as follows:

LOSSES PAID, 1918.

Medical	\$207,097.47
Temporary total disability	544,061.24
Permanent total disability	1,307.97
Dismemberment	440,010.71
Death—dependency	157,723.38
Death—funeral expense.....	15,286.75
Total losses paid.....	1,365,217.52

SOCIAL INSURANCE.

Provision for Retirement of School Teachers in District of Columbia.

CONGRESS has passed a bill, which received the approval of the President on January 15, granting to the school teachers of the District of Columbia a system providing for the retirement of aged or disabled teachers. Thirty-five States have passed such laws, the majority of which are State-wide in scope although a few are more restricted, applying only to certain cities, counties, or other State subdivisions. It has now at last been recognized by Congress that the best interests of the schools of the District of Columbia demand a retirement system for its school teachers.

The law has the indorsement of the teachers, the Board of Education, the Commissioners of the District of Columbia, and various civic bodies of the District.

In order to provide the funds necessary to pay the annuities which become payable under the act, the law first provides that a sufficient amount is to be deducted monthly from the salary of each teacher to purchase an annuity equal to 1 per cent of his average annual basic salary as fixed by the law of 1906 (Public, No. 254). The amounts so deducted are to be deposited with the Treasurer of the United States to be invested by him and credited to the individual account of each teacher. In addition to the annuity thus created, an amount equal to \$10 for each year of service of the retired teacher is to be paid by the Government from the same fund as the current expenses of the District of Columbia are now paid or may hereafter be paid.

The age of voluntary retirement for old age is 62 years and that of involuntary retirement 70 years. Pensions will not be paid for old age unless the teacher has taught continuously in the public schools of the District of Columbia from his fifty-second year. Teachers 45 years of age or over, or who have taught continuously in the schools of the District for 15 years, who become disabled or physically or mentally unfit may be retired. Credit is given for service as a public-school teacher outside the District of Columbia to the extent of 10

years. However, the last 10 years immediately prior to his retirement must have been served in the public schools of the District of Columbia.

The minimum annuity of a teacher who retires because of age is \$480 and the minimum for retirement because of disability is \$420. The maximum average annual basic salary on which annuities may be computed is \$1,500. Upon retirement the teacher receives for the remainder of his life (1) the annuity which he has purchased out of his salary, equal to 1 per cent of his average annual basic salary for each year of his whole term of service, and (2) the annuity of \$10 per year for each year of service. For example, a teacher who retires at 62 years of age after teaching 40 years at an average annual basic salary of \$800 would receive annually 1 per cent of his average salary for each year of his service, or (\$8 multiplied by 40) \$320, the amount purchased by the teacher; and in addition thereto (\$10 multiplied by 40) \$400, the amount contributed by the Government to be paid from the same fund as the current expenses of the District of Columbia, making a total annuity of \$720.

All teachers accepting positions in the public-school service of the District of Columbia are deemed to have accepted the provisions of the law and the act is in no way to interfere with the right of the school board to discharge a teacher. If a teacher resigns from the service, dies before retirement, or is discharged he or his personal representative is entitled to receive the sums deducted from his salary with interest at 4 per cent, compounded annually.

The sum of \$50,000 is appropriated to carry out the provisions of the act, not more than \$5,000 of which may be devoted to clerical expenses. The Secretary of the Treasury is required to render annually to Congress a detailed and comparative report of all receipts and disbursements under the act.

An interesting question arises with regard to annuities for physical disability. Recently Congress extended the provisions of the Federal employees' compensation act to the employees of the District of Columbia, and it has been held that public-school teachers are included thereunder. The question thus presented is whether a school teacher who is receiving a pension for disability under this law will be permitted to receive compensation for his disabilities under the compensation act also. It will be interesting to note what solution will be made of this problem.

Health Insurance in Resolutions of American Public Health Association.

RESOLUTIONS adopted by the American Public Health Association, at the annual meeting at New Orleans, October 27-30, 1919, include the following relating to the matter of health insurance:

Whereas in the presidential address of Dr. Lee K. Frankel, president of the American Public Health Association, and in the paper presented by Sir Arthur Newsholme, lately the chief medical officer of the local government board of England and Wales, the question of health insurance was dealt with and the need illustrated for some system whereby the health of the people of all the countries represented by the American Public Health Association may receive the greatest degree of care which science makes possible, and

Whereas it has been shown in various countries that this can only be done by Governments assisting through legislation the medical and social agencies at present existing; be it

Resolved, That the American Public Health Association representing, as it does already through its members, a large part of the official work already carried on through Federal, State, and municipal authorities, does hereby urge the appointment of committees in the several countries represented in the Association by their Federal Governments, to study existing methods for the preservation and improvement of the health of the people of these several countries, such as hospital facilities, public health activities, charitable institutions and compulsory health insurance, with a view to reporting some adequate plan for coordinating already existing activities and for extending the application of scientific and social agencies for accomplishing the desired ends.

Maternity Benefit Systems in Certain Foreign Countries.¹

NEARLY all the leading industrial countries of the world have some kind of maternity insurance system. A recent report issued by the United States Children's Bureau¹ includes a study of the systems adopted by Australia, Austria, Denmark, France, Germany, Great Britain, Italy, Luxemburg, Netherlands, New Zealand, Norway, Russia, Sweden, and Switzerland. Particular attention is given to the British system because industrial conditions in that country most closely resemble those in the United States, and because the results of the system have directed attention to the needs of the wage-earning mother in an especially striking manner.

There are three kinds of maternity insurance systems now in use in the above-mentioned countries:

¹ Maternity benefit systems in certain foreign countries, by Henry J. Harris, 1919, 206 pp. United States Children's Bureau Publication 57. Legal series No. 3.

1. Where no cash benefit is provided. The mother is furnished both before and after confinement with skilled nurses and medical attendance, for which she pays if she is able. Example: New Zealand.

2. The State furnishes outright a sum of money from State funds. Example: Australia, which pays the substantial sum of \$25 on occasion of childbirth.

3. The insurance method. Contributions are collected from the employer and insured person and sometimes from the State. Money, medical aid, and institutional care are available on the birth of the child. Example: Great Britain.

Most of the systems provide aid for the unmarried mother. In New Zealand only is she excluded.

To avoid creating additional administrative machinery, these maternity systems have been combined, whenever possible, with the sickness insurance systems.

In 1913-14 the Commonwealth of Australia paid out \$3,284,839 in maternity benefits, a sum representing 3 per cent of the consolidated revenue of the Government. In France, the National Government pays each year \$1,000,000 and the local governments another \$1,000,000 in maternity allowances. Under the abnormal conditions caused by the war the German Government appropriated 5,000,000 marks monthly for maternity benefits.

The operation of the British maternity benefit system is revealing much valuable information in connection with the general question of the relation of economic conditions to public health. It has been made clear, for example, that expectant mothers were in many cases under the necessity of running every kind of risk, because they could not afford to cease work. The assurance of receiving the maternity benefit encourages them to seek, and enables them to obey, medical advice during pregnancy, thus protecting themselves, partially at least, from poverty and the evils of ignorance. The relief afforded from insecurity, with its attendant strain, is emphasized by insured persons when expressing appreciation of the benefit.

The tendency seems to be toward compulsory systems. France and Great Britain, although previously opposed to it, went on record at the last international congress on social insurance at Rome in 1908, as favoring the compulsory plan. No country which has tried a form of maternity insurance has ever abandoned the plan: on the contrary, amending laws have in practically every case extended the system.

The systems in vogue in the various countries are given in considerable detail. In most cases information is given on the following phases of the plans: History of present system; industries or occu-

pations included; persons included; benefits; sources of income; general and financial administration; operations; opinions of legislators, employers, wage earners, social workers, etc., as to effect of the system.

Sources of information are given in practically every case and there is an extensive bibliography of general sources at the end of the volume.

Modification of British Out-of-Work Donation Plan.

ACCORDING to the British Labor Gazette for December, 1919 (p. 524), it was decided that the out-of-work donation scheme¹ instituted in November, 1918, in connection with the demobilization of the war forces and of workers in war industries should be discontinued on November 24, 1919, in so far as it relates to civilian workers. The scheme originally was intended to last for a period of six months, but owing to the high rate of unemployment it was decided in May, 1919, to extend the scheme in modified form for a further six months.

The numbers claiming donation rose rapidly during December, 1918, but the greatest increase was shown during January, 1919, the number at the end of that month being almost double that recorded at the end of December. The maximum point was reached at the beginning of March, when nearly 800,000 were claiming donation, of whom more than half were women. From that date onward there was a rapid decline, but on May 24, when the original scheme should have terminated, there were still over 400,000 claiming donation. The labor situation improved very rapidly at this time and this was reflected in a marked decrease in the number of applicants for donation, though some of the decline was also attributable to the inability of the applicants to satisfy the conditions attached to the extension of the original scheme, particularly in the case of women. By the end of June the total number had fallen to only 233,000 and the number of women applicants was less than a quarter of that recorded at the end of February. The decline continued until September 26, when the total was 100,731, of whom the women applicants formed less than one-third.

On September 22 the molders' dispute began, and this was followed on September 26 by the strike of railway workers. The effect was soon apparent in the increased number of applications from men and boys, particularly in the engineering and iron-founding trades, and on November 21 there were 108,320 male applicants, of whom 45,889 were in these trades. In the case of women's industries, however, which were not affected by the molders' dispute, the decrease continued, and on November 21 there were only 29,317 female applicants for out-of-work donation at employment exchanges.

¹ See MONTHLY LABOR REVIEW for January, 1919 (p. 62), February, 1919 (pp. 88-90), and May, 1919 (pp. 85-100), for discussion of the out-of-work donation plan.

The Gazette gives the number of persons on donation on November 21, 1919—"the late date for which there will be complete records for civilians as well as for ex-members of His Majesty's forces"—as 491,546, compared with 408,708 on September 19, prior to which date there had been a continued decline since the maximum figure of 1,093,400 was reached on May 2. Of the 491,546 persons receiving benefits, 353,909 were ex-service men and women, and 137,637 were civilians; and of these 137,637 persons, 29,317, or 21.3 per cent, were females. On November 28, the latest date for which figures are given in the Gazette, the total number of applications by ex-service men and women had increased to 358,823, of which 5,155 were filed by women.

It is stated that on November 25, 1919, an extension of the donation to ex-service men and women came into force whereby a payment of 20 shillings to men and 15 shillings to women can be made to those persons who have exhausted their rights to donation under the original scheme. Up to December 6, 20,496 applications under the special extension scheme had been approved.

Pensions for Employees of State Industrial Establishments in France.¹

A LAW promulgated October 21, 1919, provides for a minimum retirement pension of 1,800 francs² for each male employee who shall have reached the age of 60 years and been 30 years in the State service, and 1,500 francs for each female employee who shall have reached the age of 55 years and been 30 years in the State service, in any of the following branches: Manufacture of tobacco and matches, State warehouses for manufactured goods in transit, general bureaus of printing and engraving (*atelier du timbre*), bureaus of posts and telegraphs and of mints and medals, military establishments under the supervision of the ministers of war and industrial reconstruction, and arsenals and naval establishments, subject to the regulations concerning premium payments into the national old-age retirement fund, and in consideration of which a pension shall have been or will be payable at a date subsequent to December 31, 1918.

A minimum pension of 1,500 francs is payable to laborers enrolled in the marine service, and laborers enrolled as second class in the army; 1,650 francs to head and first-class workers in the army who have reached the age of 50 years and have served 25 years.

¹ Journal Officiel de la République Française, Paris, Oct. 22, 1919.

² Conversions into United States money are not made owing to fluctuations in value of the franc. Normally the par value of the franc is 19.3 cents.

The pension is increased one-thirtieth for those eligible to retirement after 30 years and one-twenty-fifth for those eligible to retirement after 25 years of service, for each year of service over 30 and 25 years, respectively.

These minima will be substituted for total or partial invalidity compensation now in course of liquidation, subject to the same conditions as to date.

An employee may be retired for total disability after 15 years of service, but in that case the pension for those required to serve 25 years to be eligible to retirement shall be reduced by one twenty-fifth for each year not served up to 25. An employee may be retired for partial disability after 20 years of service, unless the administration provides him with other employment, but in that case the pension shall be reduced one-thirtieth for each year not served up to 30. In neither of these cases is age to be taken into consideration.

Length of service in the Army or Navy on account of which a pension is allowed is counted in establishing the right to a pension and the period of service, but shall not enter into the computation for determining the amount of pensions, which shall be awarded upon the years of civil service and reduced by one-thirtieth or one-twenty-fifth, as the case may be, for each year not served of the 30 or 25 years required.

The regulations in force concerning laborers' widows' pensions are modified as follows, effective January 1, 1919: A widow's pension, whether the husband was retired or died while in service after at least 15 years of service to the State, dates from the day following the death of the husband, provided marriage was contracted at least two years before the date of cessation of service, or that he leaves one or more children issues of that marriage prior to the cessation of service.

The widow's pension is equal to one-third of that to which the husband was entitled at the time of his death, either by length of service or as an invalidity pension. In case there are left three or more children under 16 years of age, or who are unable to perform any work, this pension is increased to one-half of that to which the husband was entitled at the time of death.

When the number of children under 16 years of age, or disqualified for work, falls below three, the pension is reduced to the minimum above set.

Full orphans, if pensioned because of the death of the father, are entitled to one-third, and if three or more in number to one-half, of the pension to which the father would have been entitled; if pensioned because of the death of the mother, they are entitled to one-

third of the mother's earned pension. These pensions are payable until the youngest child shall have reached the age of 16 years.

Employees in the naval service may, within six months, voluntarily change their status under present pension laws and become subject to this law. When the status is so changed the length of service is considered, both in determining the eligibility for retirement and in calculating the amount of pension.

Reduction of State Subsidies to Unemployment Funds in France.

ACCORDING to the Journal Officiel (Paris) for October 18, 1919, the President of France, on October 17, signed a decree amending previous decrees relating to State subsidies to municipal and departmental unemployment funds.

By decree dated April 19, 1918, provision was made for the establishment of unemployment funds, and the amount to be paid to workers partially unemployed as a result of lack of raw materials or coal was fixed at 3 francs per day for adults and 2 francs per day for boys under 16 for each full day of unemployment. The new decree modifies this provision by increasing the unemployment benefit to 4.5 francs for adult males and to 3 francs for boys under 16 years of age, provided, however, that the total relief so granted does not exceed one-half the wage locally current.

Under the decree issued January 26, 1919, the State subsidy payable, between February 1 and November 15, 1919, to unemployment funds for workers partially unemployed for the reasons stated above, was fixed at 60 per cent of the relief granted, on condition that 20 per cent be contributed by employers. This decree has been modified by a provision that from November 16, 1919, to March 15, 1920, the State subsidy shall be 40 per cent and the employers' contribution 30 per cent, and beginning with March 16, 1920, the subsidy shall be 33 per cent and the employers' contribution not less than one-third of the expenses resulting from relief paid to their staff.

The decree of October 17 also amends the decree of January 14, 1919, which provided that the State subsidy to funds granting unemployment relief to persons out of work for other reasons than lack of raw materials or coal, for a period of 10 months from the issue of the decree, should be 75 per cent of the relief paid in cash, within certain limits. The new order fixes the subsidy for the period November 16, 1919, to March 15, 1920, at 50 per cent of the amount of relief paid, and restricts it to 33 per cent of the amount of relief on and after March 16.

New Regulation of Maternity Insurance in Germany.¹

A LAW enacted on September 26, 1919² has amended, abrogated, and supplemented a number of those sections of the German Workmen's Insurance Code which deal with maternity insurance. Briefly summarized the principal provisions of the law are the following:

Women in confinement who during the year preceding confinement have been insured against sickness for at least six months on the basis of the Workmen's Insurance Code or in a miner's sick fund shall be entitled to the following maternity benefits: (1) An allowance not to exceed 25 marks³ for the services of a midwife or medical treatment if such are needed during pregnancy; (2) a lump sum of 50 marks for defraying the costs of confinement; (3) a pecuniary maternity benefit to the amount of the pecuniary sick benefit but of not less than 1.50 marks per day, inclusive of Sundays and holidays, for 10 weeks, of which at least 6 must fall in the period after delivery; and (4) to mothers nursing their infants at the breast a nursing benefit to the amount of half the pecuniary sick benefit but of not less than 75 pfennigs per day, inclusive of Sundays and holidays, for a period of 12 weeks after delivery. The same benefits are payable to the wives of insured workmen and to the daughters, stepdaughters, and foster daughters who live with them in the same household and are themselves exempt from the obligation to insure, and also to all women of moderate means in confinement, but with the restriction that their pecuniary maternity and nursing benefit, which, as they are not insured, can not be based on the pecuniary sick benefit, shall amount to 1.50 and 0.75 mark per day, respectively. The law defines a woman of moderate means in confinement as a married woman in confinement whose husband's and own income in the calendar or fiscal year before delivery has not exceeded 2,500 marks, or an unmarried woman in confinement whose yearly income has not exceeded 2,000 marks. This income limit is to be increased by 250 marks for each living child under 15 years of age.

In the case of insured women in confinement or of insured persons' wives, daughters, stepdaughters, and foster daughters who live with them in the same household and are themselves exempt from insurance, but not in the case of women of moderate means in confinement, the by-laws of sick funds may extend the period during which a

¹ Reichs-Arbeitsblatt. Berlin, Oct. 27, 1919, p. 773.

² Reichs-Gesetzblatt, 1919, pp. 1757-1763.

³ Owing to fluctuations in the value of German money, conversions into American money are not made. Normally the par value of the mark is 23.8 cents and of the pfennig 0.0024 cent.

pecuniary maternity benefit is payable to 13 weeks and that during which a nursing benefit is payable to 26 weeks. The by-laws of sick funds may also increase the amount of both the pecuniary maternity benefit and the nursing benefit of insured persons' wives, daughters, stepdaughters, and foster daughters who are themselves exempt from insurance up to one-half of the pecuniary sick benefit of the insured person, and may also grant medical treatment to sick noninsured members of the family of an insured person as well as a funeral benefit in case of death of the consort or a child of an insured person. In place of the pecuniary allowances for costs of medical and midwife's services and of confinement, the sick funds, miners' sick funds, etc., may also grant free treatment by a physician and midwife as well as the required medicines. In such a case all women in confinement, without exception, and therefore also women of moderate means, are entitled to these benefits in kind.

In order to put the sick funds on a financial basis which will enable them to grant these increased maternity benefits, the new law has increased the regular contributions to sick funds from 4.5 to 7.5 per cent of the basic wage of the insured persons. The contributions may not be increased to an amount exceeding 7.5 per cent of the basic wage except when it is required for covering the payment of the regular benefits or upon joint resolution of the employers and insured persons. Funds which grant medical treatment to sick noninsured members of the family of an insured person and a funeral benefit in the case of death of the consort or a child of an insured person, may levy a higher contribution from insured persons who have a family.

The granting of the benefits to the insured persons and to the members of their families is to be effected through the local sick fund to which the insured person belongs. In the case of women of moderate means in confinement the benefits shall be paid by the general local sick fund of the district of which the woman in confinement claims legal residence, and if such a fund does not exist the rural sick fund shall pay the benefits. Persons employed in agriculture and domestic servants, who under articles 418 and 435 of the Workmen's Insurance Code are exempt from the obligation to insure, must be granted by their employer from his own means the maternity benefits provided by the present law for those female members of their families who are not subject to compulsory insurance. If the employer fails to provide the benefits prescribed by the law the rural sick fund or the general local sick fund shall on request pay these benefits to the persons in question. The employer must then refund the benefits to the sick fund. Benefits paid by sick funds to women of moderate means in confinement are refunded

to them in full by the national treasury, which also refunds one-half of the regular benefits paid to insured persons' wives, daughters, stepdaughters, and foster daughters who are themselves exempt from compulsory insurance. The sick funds shall report all disbursements for maternity benefits to the insurance office of their district, which shall have the right to refuse refund of improperly made disbursements. The decision of the insurance office in this respect may be appealed to the superior insurance office, the decision of which is final.

In so far as under other legal provisions a family member exempt from insurance has a claim to compensation for damages due to maternity, this claim is transferred to the sick fund or the agricultural employer up to the amount of the benefits paid by them. If a sick fund has thus been compensated the national treasury shall have a claim to one-half the compensation received by the sick fund. In so far as an unmarried woman of moderate means in confinement has a claim on the father of her child for compensation of costs of confinement and other costs, her claim is transferred to the national treasury. Claims for support of a woman in confinement against relatives responsible for her support are likewise transferred to the national treasury. The father of the child and the relatives are jointly liable to the national treasury as debtors.

Thus the new law has not enlarged the sphere of persons entitled to maternity benefits as compared with the emergency decree on maternity benefits issued April 23, 1915, but it has considerably increased the benefits. The lump-sum benefit has been increased from 25 to 50 marks, the daily pecuniary benefit from 1 mark to 1.5 marks and the duration of this benefit from 8 to 10 weeks, the allowance for services of a midwife and physician from 10 marks to 25 marks, and the daily nursing benefit from 50 to 75 pfennigs. A noteworthy innovation is that according to the new law all legal claims for compensation of a woman in confinement due to maternity are transferred to the sick funds which pay the benefits and to the national treasury, up to the amount of the maternity benefits granted.

LABOR LAWS.

New Transport Act in Great Britain.

A NEW railroad-control act passed the British Parliament and received royal assent on August 15, 1919. The act provides for the creation of a ministry of transport and for a unified governmental control of all railroads and other means of transportation. The ministry also has the power to extend or improve existing lines or to construct additional facilities. This control is temporary, the law lapsing after two years. Only those terms of the act which directly affect the employees of the railroads are here considered.

The minister of transport is given authority to fix railroad tariffs and wages. At the same time the financing of the railroads remains as far as possible in the hands of the owners.

No employee is to be required to accept conditions of employment or remuneration less favorable than those now enjoyed by said employees. If any question arises as to the application of that principle the matter is to be referred to a permanent arbitrator or board of arbitration appointed by the Lord Chancellor. The findings of such an arbitrator or board shall be carried out forthwith. All employees are guaranteed the maintenance of all their existing rights as to wages, terms of employment, pensions, sick benefits, and other allowances. Advisory committees are provided for, which the minister may consult before formulating general policies such as may affect rates, wages, and services.

Sections Affecting Industrial Relations.

THE principal sections of the law affecting industrial relations are here reproduced in full:

3 (c). The directors and other persons concerned with the management, and officers and servants of any undertaking of the whole or part of which, or of the plant whereof, possession is retained or taken shall obey the directions of the minister as to the user thereof, and any directions of the minister in relation to the undertaking or part or plant thereof of which possession is retained or taken—

I. As to the rates, fares, tolls, dues, and charges to be charged: subject, however, to the provisions hereinafter contained respecting references to the advisory committee established for advising as to directions on the matters aforesaid;

II. As to the salaries, wages, and remuneration and conditions of employment of persons employed on or in connection with the undertaking;

III. As to the working or discontinuance of the working of the undertaking or any part thereof, including directions as to keeping open or closing of any stations;

IV. For securing that the permanent way, rolling stock, plant, appliances, or equipment, whether fixed or movable, are satisfactory in type and design;

V. As to the carrying out of alterations, improvements, and additions which the minister considers necessary for the public safety or for the more efficient and economic working of the undertaking;

VI. For securing cooperation between undertakings and for securing the common user of facilities, rolling stock, and equipment, whether fixed or movable;

VII. For affording running powers over their system, or any part thereof, to the owners of any other undertaking;

VIII. For securing that manufacturing and repairing facilities and auxiliary and ancillary services shall be used, and the purchase and distribution of stores shall be conducted, in such manner as may be most conducive to economy and efficiency.

Nothing in this section shall be construed as authorizing the minister to compel the owners of any such undertaking either to incur capital expenditure, or to draw upon their reserve funds, for new works or capital improvements to an extent which would seriously interfere with their finances, it being the intention that the financing of the undertakings from a capital point of view shall remain as far as possible with the owners.

* * * * *

21 (1) For the purpose of giving advice and assistance to the minister with respect to and for safeguarding any interests affected by any directions as to rates, fares, tolls, dues, and other charges or special services, a committee shall be appointed, consisting of five persons, one being a person of experience in the law (who shall be chairman) nominated by the lord chancellor, two being representatives of the trading and agricultural interests nominated by the board of trade, after consultation with the associated chambers of commerce, the central chamber of agriculture, and other interests concerned, one being a representative of transportation interests nominated by the minister, one being a representative of labor interests nominated by the minister of labor, after consultation with the parliamentary committee of the Trades Union Congress and other interests concerned, together with, if deemed advisable, one additional member, who may, at the discretion of the minister, be nominated from time to time by him.

(2) Before directing any revision of any rates, fares, tolls, dues, or other charges, or of any special services, the minister shall refer the matter to the committee for their advice, and they shall report thereon to him, and where such revision is for the purpose of an increase in the net revenue of any undertakings which the minister determines to be necessary, the committee shall also advise as to the best methods of obtaining such increase from the different classes of traffic, having due regard to existing contracts and the fairness and adequacy of the methods proposed to be adopted. Before prescribing the limits of rates, tolls, or charges in connection with a new transport service established under section 9 of this act, the minister shall refer the matter to the committee for their advice.

(3) The committee, before reporting or advising on any matters referred to them under this section, shall, unless in their discretion they consider it unnecessary or undesirable to do so, give such public notice as they think best

adapted for informing persons affected of the date when and the place where they will inquire into the matter, and any persons affected may make representations to the committee, and, unless in their discretion the committee consider it unnecessary, shall be heard at such inquiry, and if the committee in their discretion think fit, the whole or any part of the proceedings at such inquiry may be open to the public: *Provided*, That for the purpose of this provision the council of any city, borough, burgh, county, or district shall be deemed to be persons affected in any case where such council or any persons represented by them may be affected by any such proposed revision as aforesaid.

(4) The committee shall hear such witnesses and call for such documents and accounts as they think fit, and shall have power to take evidence on oath, and for that purpose any member of the committee may administer oaths.

(5) There shall be paid out of moneys provided by Parliament to all or any of the members of the committee such salaries or other remuneration as the minister, with the consent of the treasury, may determine.

(6) For the purposes of this section, "special services" means the services mentioned in section 5 of the schedule to the orders relating to railway rates and charges, and in the corresponding sections of the schedules to the orders relating to canal tolls, rates, and charges, confirmed by various acts passed in the years 1891 to 1894.

* * * * *

(23) (1) For the purpose of giving advice and assistance to the minister in connection with the exercise and performance of his powers and duties, the minister shall set up a panel of experts, and of impartial persons of wide commercial and trading experience, appointed from nominees, after consultation with the various undertakings and interests concerned, of the various classes of undertakings affected by this act, and of labor, trading interests, local authorities, and such other interests as he may deem desirable.

(2) Before exercising any of the powers under subsection (1) (b) of section 3 of this act, to the exercise of which the owners of the undertaking concerned object, or establishing new transport services by land or water, the minister shall refer the matter to a committee selected by him from the said panel.

(3) The advisory panel or any committee to whom any matter is referred under this section shall, before reporting or advising, if they see fit, give public notice and permit any person affected or likely to be affected to place his views before them either orally or in writing.

(4) Any member of the advisory panel, or any committee thereof, or of any other committee established under this act, for giving advice and assistance to the minister, shall be considered to be acting entirely in a confidential capacity.

Creation of Central Wage Board.

ASIDE from this act but somewhat connected with it there may be noted the fact that the organizations of employees whose members are concerned in the negotiations with the Government for the standardization of railroad wages have made arrangements with the Government for dealing with questions of wages and conditions of employment during the period of the present control of railroads under the ministry of transport by a central board of five railway managers and five representatives of the trade-unions. The em-

ployee representatives are to comprise three members from the National Union of Railwaymen and two from the Associated Society of Locomotive Engineers and Firemen. Each side has power to add a sixth member.

The following item from the *British Labour Gazette*¹ explains the powers of this central board:

Failing agreement by this central board, matters in dispute and belonging to the category mentioned, namely, wages and conditions of service, will be referred to a national wages board, consisting of four railway managers, four railway workers (or their representatives), and four users of railways (of whom one shall be nominated by the parliamentary committee of the Trades Union Congress, one by the Cooperative Union, one by the Federation of British Industries, after consultation with other industrial organizations, and one by the associated chambers of commerce, after similar consultation), with an independent chairman appointed by the Government. It has been agreed by the unions concerned that no strike shall take place on account of a dispute arising on these matters until one month after the question in dispute has been referred to the national wages board.

Local committees, to which matters of purely local and other than national importance are to be referred, will be set up, and discussions are taking place at the present time as to their constitution, scope, and functions.

The Government and the railway men are also considering what representation shall be given the latter in connection with the new railroad control act. The advisory committee or panel mentioned in section 23 of the act has been set up. It consists of 16 members, 12 railroad managers and 4 representatives of the workers. It includes the following members:

Mr. C. Aldington, Great Western Railway; Mr. J. Bromley, Associated Society of Locomotive Engineers and Firemen; Sir Alexander Kaye Butterworth, North Eastern Railway; Mr. C. T. Cramp, National Union of Railwaymen; Mr. C. H. Dent, Great Northern Railway; Sir Francis Dent, South Eastern & Chatham Railway; Sir Sam Fay, Great Central Railway; Sir William Forbes, London, Brighton & South Coast Railway; Mr. D. A. Matheson, Caledonian Railway; Mr. F. Tatlow, C. B. E., Midland Railway; Right Hon. J. H. Thomas, M. P., National Union of Railwaymen; Sir Henry Thornton, K. B. E., Great Eastern Railway; Mr. A. G. Walkden, Railway Clerks' Association; Sir Herbert Walker, K. C. B., London & South Western Railway; Mr. Arthur Watson, C. B. E., Lancashire & Yorkshire Railway; Sir Thomas Williams, London & North Western Railway.

Checkweighmen Act of Great Britain.

THE widely spread practice of paying for the mining of coal by weight, the miners being authorized by law to appoint a checkweighman, received additional extension by a British law of recent enactment (ch. 51, 9 and 10 Geo. 5). This law, known as the Check Weighing in Various Industries Act, 1919, applies to—

¹ December, 1919, p. 516.

The production or manufacture of iron or steel, including any process of founding, converting, casting, rolling, or otherwise finishing iron or steel.

The loading or unloading of goods, whether as cargo or stores, into and from vessels.

The getting of chalk or limestone from quarries.

The manufacture of cement and lime.

Any other industry to which the provisions of this act may be extended by regulations made by the secretary of state.

The appointment of the checkweighmen in these industries is to be made in the form provided for by the coal mines regulation acts. (These acts authorize the persons interested to employ at their own cost a person to be stationed at the place appointed for the weighing of the coal, and at each place appointed for the making of deductions. Such persons are to have every facility for carrying on their work, but not to impede or interfere with the progress of the work of the establishment.)

Special provisions are made in annexed schedules for the different kinds of industries, so as to adapt the methods used to the specific conditions. Where the quantity is determined or estimated otherwise than by weighing, the checkweigher is to perform such duties as the circumstances render proper. Penalties are provided for the disclosure of any trade secret or other information with regard to the employer's business which the checkweigher may become aware of by reason of his position. Employers are required to post notices and distribute copies of the regulations made for the carrying out of this act. Disputes are to be settled by arbitration either by a specially appointed arbitrator or by a judge of the county court.

Labor Laws of Czecho-Slovakia.¹

THE LAW of October 28, 1918 (No. 11, Compiled Laws), provides for the temporary validation in Bohemia of the Austrian laws, and that of December 10, 1918 (No. 64, Compiled Laws), recognizes for the time being the validity of the laws of Hungary in Slovakia. The Austrian labor laws, with the exception of the law relative to sick funds, being considered more liberal than those of Hungary, it is intended to introduce them gradually also in Slovakia.

Several modifications of the Austrian labor laws have already been enacted and are here briefly set forth.

¹ La Conférence du Travail et l'État Tchéco-Slovaque. Ministère de la Prévoyance Social, Prague, 1919.

The Austrian Civil Code was amended March 19, 1916 (No. 69, Compiled Laws), in so far as it related to labor contracts. This amendment provides for the payment of the contract wages at customary periods. Workers who have been in the same employment over two weeks are entitled to the receipt of wages even when, owing to sickness, disability due to an accident, or force majeure, they do not perform work, but only for a period not in excess of one week. Workers are also entitled to pay for loss of time due to the act of the employer. An employer is required to organize his establishment and working appliances so as to safeguard the life and health of employees, and if the employee lodges and boards with the employer's family, consideration must be given to the health, morals, and religion of the employee.

The term of service ends as a rule on the expiration of the labor contract. Common laborers who are paid by the hour, day, piece, or task, may, however, be discharged on one day's notice, or on Saturday when the employee is dependent mainly on his labor or when weekly wages have been agreed upon. Skilled laborers who are dependent mainly on their labor may be discharged only after four weeks' notice, and all others only after two weeks' notice. Similar notice of his intention to quit service is required on the part of an employee. Contracts may be terminated for valid reasons. Employees, upon termination of contract, may demand a certificate setting forth the length of employment and the character of service performed. The certificate shall, however, not contain any note or remark which will create a moral prejudice against the employee.

Hours of Labor.

THE LAW of December 19, 1918 (No. 91, Compiled Laws), establishes an 8-hour day or a 48-hour week. In certain classes of work (transportation, agriculture, etc.) agreements for a longer day are valid provided the 48-hour week or a total working time of 192 hours during a 4-week period is observed. The act applies in general to all industrial establishments. State-operated factories and establishments, public and private associations, foundations, groups, or societies engaged in work for the public welfare or of public utility, mines, below or above ground, and metallurgical establishments, and to persons regularly employed in agriculture and forestry not living with the employer's family and paid by the day, week, or month. Persons living with the employer and under contract for a period exceeding one month, or persons in personal service, including those receiving payment in kind, shall be allowed 12 hours' rest in each 24, of which 8 must be unbroken and at night. Laborers shall have a rest

period of 32 consecutive hours each week, which must include Sunday, and persons working in the home of the employer shall have a rest period of not less than 18 consecutive hours each week. In establishments operated continuously, with three shifts, the Government may authorize a 52-hour week, and a reduction of the weekly uninterrupted rest period from 32 to 24 hours, twice within a three-week period. In case regular operation is interrupted by reason of a catastrophe or accident, or if public interests or other special circumstances require it, the number of hours of labor may be increased not to exceed 240 hours extending over 20 weeks, in any one year, provided there is no other method of making up the loss of production.

Night work.—Work between 10 p. m. and 5 a. m. is prohibited, but certain classes of establishments may be authorized to work at night. In these the work may be divided into two shifts, but no night shift shall work more than seven hours, male persons alone being permitted to work.

Sunday rest.—Sunday rest is obligatory in all industries and occupations, but in certain classes of work, such as the cleaning of dwellings, repairing, that of watchmen, the taking of a yearly inventory, work to safeguard against imminent danger, and in establishments in which work can not be stopped without affecting their normal operation, or in the preparation of perishable products, etc., Sunday work may be authorized.

Employment of Women and Children.

THE employment of women in industrial and commercial establishments and in mining during the six weeks following parturition is prohibited, except that upon a physician's certificate they may be employed in mines after four weeks from parturition. All women engaged in industry, agriculture, or household duties are covered by the obligatory sickness-insurance law. (*See Social insurance.*)

The law of December 19, 1918 (No. 91, Compiled Laws), prohibits the employment of women between 9 p. m. and 5 a. m., except that the employment of females over 18 years of age may be authorized for short periods in establishments preparing perishable products (seasonal industries), in establishments where work is continuous, and in work demanded by the public interest, if such work is not arduous. This law has been interpreted to include dairies, hotels and restaurants, railroad ticket offices, telephone and telegraph services, daily newspapers, theaters, etc., hospitals, asylums, prisons, etc. The law relating to daily hours of labor is applicable to women with the additional provision that "for women employed in factories the consecutive weekly rest of 32 hours shall begin Saturday not later than 2 p. m." Certain groups of establishments have been granted authority to dis-

regard this provision when the weekly hours of labor per week do not exceed 48. Females under 18 shall not be employed in work detrimental to their physical development. Males only are permitted to work underground. The provisions of the Austrian law relating to dangerous and unhealthy processes or occupations remain in force.

The same law extends the laws for the protection of minors to all classes of young persons. The employment of children under 14 years of age, unless they shall have completed their schooling, is prohibited. Males under 16 and females under 18 may not be employed in any work injurious to their health and physical development. All persons under 18 years of age working in industrial establishments shall be granted the leave required for attending continuation and trade schools.

The employment of children under 12 years of age is absolutely prohibited. Those 12 years of age and over may be employed without compensation but only under conditions not injurious to health, nor detrimental to their physical or moral development, and provided they continue to comply with the school attendance law. They may not be employed before school hours in the morning, nor during the two hours preceding the afternoon session. In agriculture and domestic labor this prohibition is limited to the noon recess. Work during vacation is limited to four hours daily in agriculture, and six hours in domestic service. Labor on Sunday and religious holidays and all domestic and agricultural work between 8 p. m. and 6 a. m. is prohibited. In restaurants and saloons it is prohibited to employ children at waiting on patrons and pouring drinks. Neither may they be employed in public shows. In other occupations work is prohibited between the hours of 8 p. m. and 7 a. m. Rooms assigned to domestic work must conform to requirements of hygiene and safety. Children working for wages who do not belong to the family of the employer may be paid in part in kind, but only in clothing, food, lodging, and school supplies, and never in alcoholic beverages. The distribution of spirituous liquors and tobacco during working hours is prohibited.

Work on State Account.

THREE decrees are in force providing for State supervision of labor conditions on work done by contractors. Employers must, so far as possible, employ citizen laborers, preference being given to those living near the place where work is being done. Employers are required to take all necessary precautions to safeguard the life, health, and morality of employees, and, in construction work, to assure their lodging and board. Wages must be paid in legal tender. Minimum

wages in the clothing industry are fixed by a wage board composed of State officials, employees, and employers. In fixing such wages, not only the character of the work but also living conditions in the locality shall be considered. Employees engaged in the finishing processes are not subject to any deduction from wages for light, heat, or materials or working tools furnished. They are to be reimbursed for thread purchased by them.

Social Insurance.

THE LAW of December 10, 1918 (No. 63, Compiled Laws), as amended, requires that every citizen shall work to his full physical and intellectual capacity, either as an employer or employee, and provides that all persons whose wages are the principal source of their income and who are unable to secure employment, demobilized soldiers, and persons especially worthy of assistance are entitled to unemployment benefits not in excess of 5 crowns¹ per day. If the employee is the head of a family he is allowed 1 crown in addition for the wife or common-law wife and 1 crown for each child under 14 years of age, the total benefits in no case to exceed 10 crowns per day. If suitable work is provided in the district in which the employee is residing it must not be refused. This law was enacted as a mere temporary measure suited to conditions after the termination of the war. The Government has under consideration the enactment of a definitive law on unemployment relief. The draft of this law provides for unemployment insurance through workers' mutual aid organizations, which are to be under State control and will be subsidized by the State. Only members of such organizations are to have a claim to unemployment relief.

The Austrian laws relative to employment bureaus, jurisdiction of the common law and industrial arbitration courts, the right of association and combination, and collective contracts remain in force.

Sickness insurance.—Sickness insurance is obligatory (law of May 15, 1919, No. 68, Compiled Laws) for persons regularly working for wages or salary, under contract or as apprentice, and whose wages are their principal source of income. Those earning over 3,500 crowns a year are exempt. All industries—agriculture, forestry, railroad work, mines, and domestic labor—are included. For certain classes such insurance is elective. Employees of the State, Provinces and communes, and of public foundations, when paid a fixed yearly salary and entitled to at least 39 weeks' sick leave, with pay, are excluded.

From the first day of sickness insured persons are entitled to free medical attendance, including the services of an obstetrician and

¹ Value not known. The par value of the Austrian crown is 20.3 cents.

midwife if necessary, and to the necessary medicines and other therapeutic means. In cases of sickness in excess of three days a pecuniary benefit equal to 60 per cent of the wages of the insured person, but not exceeding 6 crowns per day, shall be granted for a period not exceeding 39 weeks. In maternity cases the insured are entitled to the pecuniary sick benefit for as long as they are unable to work and after parturition during a period not in excess of six weeks. If the mother nurses her child at the breast she receives in addition to the regular sick benefit a nursing premium equal to half the sick benefit for a period of 12 weeks. In case of death of the insured his survivors are granted a funeral benefit equal to 30 times his daily wages, but never less than 90 crowns. Insured persons may have free treatment in a hospital instead of the medical treatment, medicines, and pecuniary benefit described. One-half of the pecuniary benefit is, however, payable to the descendants and ascendants of the insured person during the entire period of his stay in a hospital.

The by-laws of sick funds may permit sick, funeral, and maternity benefits to be granted also to those descendants and ascendants of an insured member who are dependent on him and are not subject to compulsory insurance. Special funds may be established for purposes connected with sickness insurance, such as aid to sick persons and convalescents, prevention of contagious disease (tuberculosis, venereal diseases), alcoholism, etc.

The means for the support of the various sick funds are procured by assessments levied in the form of a percentage—not in excess of 25—of the daily wages of the insured persons. The employees pay two-thirds and the employers one-third of the premium rate fixed by the fund to which the workman belongs. The employer is held responsible for the payment of the entire premium. If the worker does not receive any cash wages the employer must pay the whole premium.

Six kinds of sick funds are authorized to insure workers against sickness: (1) Regional funds, (2) establishment funds, (3) trade-union funds, (4) mutual funds, (5) benevolent funds, and (6) various authorized mutual aid societies. All funds authorized to insure workers against sickness are subject to State control.

Accident insurance.—Accident insurance is compulsory for all persons employed in factories, blast furnaces, mines, quarries, shipyards and subsidiary establishments, in building operations, in establishments manufacturing or using explosives, in agriculture and forestry when using machinery requiring other than man power, on railroads, in transportation, in cleaning work, in storage houses, and in theaters, and for fire departments, night watchmen, stone cut-

ters, well diggers, etc. All accidents, whether the fault of the employee or of the employer, are compensable, but the employer is held responsible when the accident is due entirely to his intentional act. The employer bears the entire burden of the cost of insurance by contributing to the insurance fund 2.7 per cent of wages paid by him. Compensation is payable beginning with the fifth week of disability, benefits for the first four weeks being paid by the sickness fund. When yearly earnings exceed 6,000 crowns, that amount only is considered in calculating the compensation, which shall not be more than two-thirds of the annual earnings. If death ensues a funeral benefit of 150 crowns and survivors' benefits become payable.

Annual Leave by Law for Manual Workers in Austria.¹

IN JULY, 1919, the Austrian ministry for social welfare (*Staatseamt für Soziale Verwaltung*) submitted to the National Assembly a bill providing for an annual vacation for all classes of wage workers as being necessary to the maintenance of health. The bill had the indorsement of the executive committee of the Federation of Austrian Trade-Unions (*Gewerkschaftskommission*), was passed by the National Assembly, and became effective on August 21, 1919. Thus an old demand of the working class has for the first time received legal sanction through enactment of a national law.

The law is applicable to all male and female workers covered by the Industrial Code or article 2 of the mercantile employees' law, to all workers employed in undertakings not subject to the Industrial Code and belonging to the State, a Province, a commune, or other corporation, to all railroad workers, workers of navigation, public amusement and theatrical enterprises, and to miners. The circle of persons covered by the law may be extended by the minister of social welfare.

The law grants to workers employed one year in the same establishment annual vacation of one week with full pay computed on the basis of the average weekly earnings during the last 12 weeks of the year in question. If the worker has been receiving board as part of his compensation he is entitled to receive, in addition to his pay, an amount equivalent to one day's pecuniary sick benefit for

¹ Soziale Praxis und Archiv für Volkswohlfahrt, p. 904. Berlin, Sept. 11, 1919. Also, Arbeiter-Zeitung. Vienna, July 27, 1919.

each day of his leave. Workers who have been employed over five years in the same establishment, and juvenile workers under 16 years of age, are entitled to two weeks' annual leave with pay.

In order to prevent employers from evading the obligation by dismissing a worker before the leave falls due, the law provides that leave must be granted if at least 10 months' service has been completed or if 10 months has elapsed since the previous leave. Workers who have given notice themselves before their leave falls due or who have been dismissed for some weighty reason lose all claim to leave.

In establishments where not more than five workers are employed the leave may be divided into two parts. If an employer is short handed during the leave season and can not employ temporary labor, he may increase the regular hours of labor to the extent of two hours a day; but this must not affect the individual worker for more than 14 days consecutively in a year. The rates of pay for such overtime must be 50 per cent higher than the ordinary rates. The works councils are to be consulted with respect to the date on which leave shall begin, the possible division of leave in two parts, and overtime work made necessary owing to the granting of leave. These questions may, however, also be regulated through collective agreements and through executive order of the minister for social welfare. Contraventions of the law are punishable in accordance with the provisions of the Industrial Code and the mine workers' law.

HOUSING.

Comparative Cost of Building, 1913 and 1919.

By LEROY K. SHERMAN, PRESIDENT, UNITED STATES HOUSING CORPORATION.

THE United States Housing Corporation has completed the construction of some 6,000 houses and 64 dormitories. These houses are located in 25 different places in the United States, from Vallejo, Calif., to Bath, Me. Most of this work was done during the period of the war emergency and at a time when efficiency meant speed rather than cheapness, so that the actual cost of these houses was greater than would be the case under normal conditions. However, with the experience of the builders and the estimating and purchasing departments of the United States Housing Corporation, it has been possible to compile comparative estimates of cost of a typical six-room house in 1913 and in July, 1919, under normal conditions of procedure.

For the purpose of comparing the cost of dwelling-house construction there was selected a six-room frame dwelling house. This house is a very common and popular type of dwelling and is described on page 375 of Volume II of the Report of the United States Housing Corporation. It is two stories with basement, having the living room, dining room and kitchen on the first floor and three rooms, with bath and toilet on the second floor. The outside dimensions of the floor plan of the house are 22 feet 8 inches by 23 feet 8 inches. The cubical content is 14,900 cubic feet.

Specifications.

THIS house has a monolithic concrete substructure wall 8 inches thick from footings to the bottom of first-story floor joists, and is plastered from grade to the top of the wall with white cement plaster. The cellar is entirely paved with a 4-inch-thick concrete floor. Subsoil drainage under the cellar floor consists of 4-inch broken stone and a line of 4-inch-diameter tile drainpipe placed around the inside face of footings. The walls of superstructure, both interior and exterior, are of 2 by 4 inch studs sheathed, papered, and weather-boarded on the exterior, and lathed and plastered (3 coats—scratch, brown, and hard white coat) on the interior walls. The roof is

sheathed, papered, and covered with a good quality slate. All flashings and counterflashings are of galvanized iron painted with two coats of metallic paint.

Wood floors are doubled, with a layer of deadening felt between. The first and second floors are trimmed throughout with baseboard having shoe and cap moldings; all window and door openings are trimmed both sides, windows have stools and aprons, and door openings have hardwood thresholds. All rooms, excepting kitchen, bath and closets, have picture molding. A kitchen dresser is provided, and a medicine cabinet with mirror is placed in the bathroom.

The woodwork throughout is B grade, or better, yellow pine. All exterior woodwork is painted three coats of lead and oil paint, and, with the exception of the kitchen and bathroom, all interior woodwork is given two coats of varnish stain. The woodwork of the kitchen is painted two coats of lead and oil paint and the bathroom woodwork three coats of enamel. All wood floors are given two coats of boiled linseed oil. All interior plastered ceilings and walls, excepting those of kitchen and bathroom, are painted two coats of cold-water paint. Walls of kitchen and bath are sized and painted two coats of oil paint.

A complete hot-air system is provided for the heating with a "Liberty Heater," which is a combination furnace and gas heater, with stovepipe, damper, damper regulator, check damper, and an entire set of firing tools. The furnace has been tapped for the installation of hot-water coils. All pipes and stacks are covered with 16-pound paper asbestos. All registers are cast iron, black japanned, lattice design with iron borders.

The plumbing system is modern. Soils and vertical stacks are of "medium" cast iron, with all joints calked with oakum and leaded. Clean-out wyes with brass screw plugs are placed at the foot of vertical risers. Floor drains have been provided in the cellar floor and in that of the side entry for the refrigerator. The fixtures are supplied with both hot and cold water, hot water being supplied from a 24-gallon boiler connected to the kitchen range, which is also provided. With the exception of the water-closet and flushing tank, the fixtures are of enameled iron. The two fixtures named are of porcelain.

The electrical work is B-X work, according to the requirements of the National Board of Fire Underwriters. The fixtures consist of a one-light ceiling fixture, a cast canopy 5 inches in diameter with translucent glass shade, for the kitchen, first and second story halls, and bedrooms, a one-light fixture with cast canopy and chains supporting a 12-inch opal glass bowl for semidirect lighting for the dining room, and a two-light fixture of the same kind for the living room. The fixtures throughout are of metal-brush brass finish,

Cost.

THIS house was built between October, 1918, and May, 1919, at Watertown, N. Y., by the United States Housing Corporation, in connection with 114 other houses in the same vicinity, for the sum of \$3,908. According to a tabulation of the Housing Corporation the estimated cost of this house, if built in 1913, would have been \$2,932, exclusive of overhead and profit, with a few exceptions, and the estimated cost if constructed in July, 1919, would be \$4,930, exclusive of contractor's profit and overhead, with a few exceptions. The estimates show an increase in cost of building from 1913 to 1919 of 68 per cent, the increase for labor being 65 per cent and the increase for materials 71 per cent. The prevailing union scales of wages for laborers and mechanics in the building trades for the city of Boston in 1913 and 1919 were used in making this comparison. These scales were selected as representing to a fair degree the average increase in wages in the building trades for all parts of the country.

The following is an analysis of the unit prices for labor as given on the estimate sheets:

ANALYSIS OF UNIT PRICES FOR LABOR, 1913 AND 1919.

No.	Item.	Unit quantity.	Unit cost.	Quantity per hour.	Labor rate per hour.		Per cent of increase.
					1913.	1919.	
1	Excavation (general).....	Cubic yard.	\$0.50	0.50	\$0.25	\$0.50	100
2	Excavation (trench).....	do.	.75	.333	.25	.50	100
3	Back fill and grading.....	do.	.17	1.47	.25	.50	100
4	Cinder fill, no cement.....	do.	.40	.625	.25	.50	100
5	Plain concrete.....	do.	1.25	.20	.25	.50	100
6	Forms for concrete.....						
	Laborer's time, one and one-half carpenter's.	Square foot	.035	10.00	\$0.35 { .50 .25	\$0.60 { .75 .50	71
7	Concrete floor, cellar.....	Cubic yard.	1.50	.167	.25	.50	100
	Top dressing.....	Square foot.	.02	31.25	.625	.75	20
8	Waterproof painting.....	do.	.005	50.00	.25	.50	100
9	Drainage, cellar floor.....	Cubic foot.	.05	5.00	.25	.50	100
10	Flue lining.....	Linear foot	.05	12.50	.625	.875	40
	Plastering (interior).....						
11	Laborer's time, seven-eighths plasterer's.	Square yard	.18	2.066	.48 { .625 .315	.70 { .875 .50	46
12	Lathing.....	do.	.05	11.3	.565	.81	44
13	Corner beads.....	Linear foot.	.02	28.3	.565	.81	44
14	Plastering (exterior).....	Square yard	.313	1.693	.52 { .625 .315	.75 { .875 .50	44
15	Laborer's time, one-half plasterer's.	Square foot.	.02	25.00	.50	.75	50
16	Plaster board.....						
17	Lumber and carpentry.....	1,000 b. m.	17.14	.0219	.375 { .50 .25	.63 { .75 .50	67
	Laborer's time, equals carpenter's.						
18	Exterior millwork.....						
	Laborer's time, one-half carpenter's.	Lump sum.			.417 { .50 .25	.67 { .75 .50	60
19	Interior millwork.....						
	Laborer's time, one-half carpenter's.						
21	Roofing.....	100 square feet.	2.00	2.75	.55 { .625 .25	.80 { .875 .50	45
22	Laborer's time, one-fourth roofer's.	Lump sum.			.50	.75	50
23	Sheet metal.....	do.	100.00	.50	.50	.75	50
24	Painting.....	do.			.50	.875	75
25	Plumbing.....	do.			.55	.75	36
26	Electrical work.....	do.			.50	.75	50
27	Heating.....	do.					

Example: Item No. 6, labor, cost per hour, 1913:

Carpenters:

400 sq. ft.— 8 hrs. at \$0.50=\$4÷400 sq. ft.= \$0.01, making forms.

400 sq. ft.— 8 hrs. at .50= 4÷400 sq. ft.= .01, placing and bracing.

Laborers:

400 sq. ft.— 8 hrs. at .25= 2÷400 sq. ft.= .005, placing and bracing.

400 sq. ft.—16 hrs. at .25= 4÷400 sq. ft.= .01, wreck, clean and pile.

40 hrs.

\$0.035 unit cost.

400 sq. ft. ÷ 40 hrs. = 10 sq. ft. per hr. 10 sq. ft. × \$0.035 = \$0.35, labor rate per hour.

Labor cost, 1913 = \$14.00; labor cost, 1919 = \$24.00. 10 ÷ 14 = 71 per cent labor increase for 1919.

Cost of Building Materials and Union Scale of Wages.

THE unit prices used in the estimate for materials were obtained from the Bureau of Labor Statistics of the Department of Labor and from the published records in the various trade journals. The total percentage increase in cost of materials for the six-room houses which we have used for illustration is 71 per cent.

The rates of wages per hour for the various building trades in 1913 were obtained from a bulletin of the Bureau of Labor Statistics. The rates for 1919 are those contained in the report of the proceedings of the thirteenth annual convention of the Building Trades Department, American Federation of Labor, under date of June 4-7, 1919.

The percentage of increase in wages in 1919 over 1913 varies in the trades used in our estimate from 36 per cent to 100 per cent. The total percentage increase in the cost of labor in the six-room frame house which we have used for illustration, is 65 per cent. The total percentage of increase for both labor and materials is 68 per cent.

These percentages of increase are comparable with the data presented by Benjamin A. Howes in the October, 1919, issue of *Country Life*, which shows an increase in building labor of 75 per cent and an increase in building materials ranging from 30 to 100 per cent.

A recent publication by the Information and Education Service of the United States Department of Labor entitled "Economics of the Construction Industry," which furnishes very complete statistics of the average annual hourly scale of building trades from May, 1913, to May, 1918, gives the increase in wages as of May, 1918, as 31 per cent. The report of the United States Bureau of Labor Statistics on wholesale prices records the rise in prices of all building materials exclusive of steel as about 75 per cent in 1918 and 84 per cent in the last quarter of 1918.

It thus appears that there has been a material increase in the cost of building labor in 1919 over 1918, but this increase has only followed the corresponding increase in cost of building materials and

other commodities. The costs of both building labor and material now appear fairly comparable with other increases in the cost of living.

In addition to the estimate for the six-room frame house, estimates have been prepared for a similar house built of hollow tile and also one of brick. The comparison of the three is as follows:

COMPARISON OF COST OF SIX-ROOM DWELLING HOUSE.

Type of house.	1913	1919	Per cent of in- crease.
Frame house.....	\$2,532.36	\$4,930.58	68
Hollow-tile stuccoed house.....	3,362.65	5,665.18	68
Brick house.....	3,546.34	6,038.73	70

In the comparison of estimated costs as of 1913 and 1919, the same amount of materials and the same rates of output of labor are used in each case. The rates of output of building labor are, of course, subject to wide fluctuations. The rates assumed here have been compiled and checked by the estimating division of the United States Housing Corporation and by builders of practical experience. The efficiency of labor in the comparison presented is taken as being the same in 1919 as in 1913. With the exception of a period in the spring of 1919, many building contractors maintain that the efficiency of building labor is not so high now as it was in 1913.

In compiling these tables the cost of labor and material was figured out for each item for the house built as of 1913. The 1919 costs were arrived at by applying the percentage of increase in labor and material to the 1913 figures. It should be borne in mind that this is an estimate based on average prices and average work under union labor. There is a wide variation in the cost of labor and the cost of materials in different parts of the country, and this same house built under different conditions from those assumed here may easily vary \$500 or more in cost.

Overhead, Land, and Utilities.

THE foregoing estimates do not include public utilities, contractor's profit, and overhead or architect's fee.

From the report of the "Economics of the Construction Industry" by the United States Department of Labor, as well as from the real estate division of the United States Housing Corporation, the indications are that there has been little increase in the value of land occupied by the ordinary dwelling house. For the purpose of further comparing the total cost of the frame house, with land, appurtenances, and overhead, we will assume the following:

Cost of land (\$1,000 per acre—7 lots per acre).....	\$143.00
Cost of public utilities per lot.....	400.00
Contractor's profit and overhead.....	15 per cent.
Architect's fee—plans and supervision.....	6 per cent.

Based upon the foregoing comparison the increase in the cost of construction of a modern 6-room frame house between 1913 and 1919 becomes 66 per cent. The total cost of erection of houses in 1913 and 1919 is as follows:

TOTAL COST OF ERECTING SIX-ROOM FRAME HOUSE IN 1913 AND 1919.

Item.	1913	1919
Net cost of building.....	\$2,932.36	\$4,930.58
Cost of land at \$1,000 per acre.....	143.00	143.00
Cost of public utilities.....	400.00	680.00
Contractor's profit and overhead, 15 per cent.....	439.85	739.59
Architect's fee—plans and supervision, 6 per cent.....	202.33	340.21
Total.....	\$4,117.54	\$6,833.38

Existing Housing Problem with Reference to Increased Cost of Building.

THE housing shortage to-day is almost universal. It exists not only in the cities of the United States but in almost every other country. The housing shortage in this country due to war activities and the increased cost of construction has been estimated at 1,000,000.

The market value of a house differs from most commodities. In most commodities the consumption closely approximates the supply and the selling value follows and corresponds with the increase in cost. The selling value of dwelling houses as a commodity is governed largely by rentals which the house will bring. By far the greater part of the house rentals come, of course, from houses built during prewar costs. The rent of these houses has increased in general not over 20 per cent. This represents an increased income to the owner without an increased expenditure of capital.

An entirely different situation exists with respect to the owner renting a house built in 1919. A 20 per cent increase in rents based on 1913 costs will not bring the owner of a new building a rental sufficient to warrant him investing his money in dwellings for rental purposes. The new owner has to compete with the numerous owners of property built in prewar times.

We are speaking generally. Of course, there are many cities where the housing shortage is so acute that new buildings are built and readily rented or sold at prices considerably in excess of the 1919 estimates which we have presented. Unquestionably as the housing shortage becomes more acute and as the older houses become obsolete and go out of the market all rentals and selling values of property will tend to approach the prices based on the cost of the new house.

During this transition period the wits of people have been sharpened in an effort to meet the problem. They are using some lessons learned from the Government's housing experience during the war and they are supplying construction and financial methods which will reduce the cost of the building to the occupants. The housing problem during the transition period is being solved by more efficient methods of construction and financing so that economies in production will tend to reduce the cost of new dwellings as a compromise to meet the rising values of the older property.

A large part of the new dwelling construction now being undertaken is handled by housing companies. The membership of these companies consists largely of public-spirited citizens who are content to finance the construction of dwellings at a modest return on their investment, and they realize the incidental value which will revert to their city and their local industries by adequate housing facilities. The economies which are obtained by these housing companies are accomplished by a reduction in the overhead cost which we have mentioned in our estimate of the total cost of the dwelling to the occupant. These economies, effected by a comprehensive plan, are as follows:

1. Reduction per house in the contractor's percentage or profit and the architects' and superintendents' fees by the construction of a hundred or more houses at one time under one contract.
2. The reduced cost of materials by purchase in carload lots for wholesale building.
3. The more efficient utilization of highly subdivided and specialized labor by the ability to install a more efficient construction organization where a number of houses are built at one time.
4. The use of standards and uniform sizes in designs which do not, however, make the houses appear to be standardized.
5. The improvements in arrangement of utilities and conveniences in the house, as well as the artistic arrangement of the buildings, drives, trees, and planting, so that the added attractiveness of the house will invite the occupant in spite of an increased rental or cost.

State Loans for Cheap Dwellings in France.¹

THE law of April 12, 1906, amended December 23, 1912, relative to State loans to enterprises engaged in the building of cheap dwellings, was further amended October 24, 1919, so as to provide for multiple dwellings (apartments). Its principal provisions are as follows:

The benefits of this law apply to multiple dwellings when the annual rent of each apartment does not exceed at the time of construction the maximum shown in the following table:

¹ Journal Officiel de la République Française, Paris, Oct. 26, 1919.

MAXIMUM ANNUAL RENTAL OF APARTMENTS FOR THE CONSTRUCTION OF WHICH STATE LOANS ARE GRANTED IN FRANCE.¹

Communes, etc., to which law is applicable.	Maximum annual rent of apartments consisting of—					
	3 or more rooms each at least 9 square meters (96.9 square feet), with kitchen and water-closet, and having a total floor area ² of—	2 rooms each at least 9 square meters (96.9 square feet), with kitchen and water-closet, and having a total floor area ² of—	1 room at least 9 square meters (96.9 square feet), with kitchen, and having a total floor area ² of—	1 sleeping room, isolated, at least 9 square meters (96.9 square feet), having a total floor area ² of—		
Communes having a population of 5,000 and under.....	35 to 45 square meters (376.7 square feet) to 454.4 square (feet).	More than 45 square meters (484.4 square feet).	25 to 35 square meters (269.1 square feet) to 376.7 square (feet).	15 to 25 square meters (161.5 square feet) to 269.1 square (feet), with or without water-closet.	More than 25 square meters (269.1 square feet), with water-closet.	9 to 15 square meters (96.9 to 161.5 square feet), with or without water-closet.
	France, 300	France, 325	France, 250	France, 270	France, 165	France, 100
Communes having a population between 5,001 and 30,000 and suburbs of communes having a population within a radius of 10 kilometers (6.2 miles) of 30,001 to 200,000.....	390	425	300	325	230	120
	1.40	1.50	1.65	1.70	1.80	1.90
Communes having a population between 30,001 and 200,000, suburbs having 200,001 or more within 15 kilometers (9.3 miles), and the greater suburb of Paris, i. e., communes at a greater distance than 20 kilometers (12.4 miles) and not greater than 40 kilometers (24.9 miles).	480	520	390	425	325	150
	1.65	1.75	1.85	1.95	2.05	2.15
Communes of more than 200,000 population and the smaller suburbs of Paris, i. e., within 10 kilometers (6.2 miles).	600	650	460	520	390	210
	2.00	2.10	2.20	2.30	2.40	2.50
City of Paris and the Province of Seine.....	720	760	600	650	465	240

¹ Conversions are not made in this table owing to fluctuations in value of the franc. Normally the par value of 1 franc is 19.36 cents.² Between walls and partitions.

The annual rental of individual dwellings shall be fixed at 4 per cent of actual cost. The State may advance through the mortgage bank not more than 200,000,000 francs and the Bank of Deposits and Consignations (under Government supervision) is authorized to advance not more than 300,000,000 francs to such enterprises.

Loans are to draw 2 per cent interest annually if used in the acquisition or construction of individual cheap dwellings, or in the acquisition of small properties, under the provisions of the law of April 12, 1906, that of April 10, 1908, and subsequent laws.

If used for the acquisition or construction of cheap dwellings or small properties for rent only, the rate of interest is $2\frac{1}{2}$ per cent.

Provision is made for loans for completing dwellings now under construction:

Small Land Holdings for Laborers.¹

WITH a view to assisting laborers and families of small means to acquire small land holdings, the Provinces and communes are authorized by Parliament to purchase and resell, after subdivision, lands and rural estates. Communes are to acquire these lands under the law of April 5, 1884. Purchases by Provinces are limited to the budget prepared by the prefect and especially authorized by the provincial commission.

In all subdivisions necessary public roads must be provided for. Lots designed as homes with a garden shall not exceed 10 ares (0.25 acre), and the price of a rural homestead shall not exceed 10,000 francs.

The selling price shall be so fixed as to result neither in a gain nor a loss, and all sales must be made for cash. Property so acquired can not be transferred for 10 years, and if purchased for a home can not be used for any other purpose. The purchaser must engage to cultivate it either by himself or with the help of members of his family.

When lands have been purchased by the Province and after the division into lots has been made, plans are placed in the office of the prefecture and branch offices of the Province and are open to the public for two months. Notice is given through the official bulletin and posted in all communes. The price of each lot shall be given in these notices.

In awarding lots the commission shall consider the morality of the applicant and the number of children in the family, and preference shall be accorded to those who for the payment have arranged for long-term loans, either in a mortgage association or through a district agricultural loan fund.

¹ Journal Officiel de la République Française. Paris, Nov. 1, 1919.

LABOR ORGANIZATIONS.

Fifty-First Annual Trades-Union Congress, Great Britain.

A FULL report¹ of the Fifty-first Trades-Union Congress (Great Britain), held at Glasgow September 8 to 13, 1919, has just been received by this Bureau. This congress was made up of 851 delegates representing 5,283,676 trade-unionists, "the largest representation of organized labor that this or any other country has witnessed." The chairman of the congress was Hon. J. H. Thomas, M. P., of the National Union of Railwaymen, and the secretary was Hon. C. W. Bowerman, M. P., of the London Society of Compositors. The second day was devoted to a discussion of the report of the parliamentary committee, which dealt with a large number of subjects, among which were the International Labor Conference, the labor provisions of the peace treaty, international labor legislation, and the proposal for the amalgamation of all unions. The report on the last mentioned was not very definite, and it was decided to continue the work along this line. A resolution subsequently presented to the congress instructing the parliamentary committee to take action on the question of an amalgamation of all trades, with a view to the organization of workers under one heading, was lost.

On the third day the question of nationalization of the coal mines came up for discussion, and a resolution was adopted instructing the parliamentary committee to interview the Prime Minister and in the name of the entire labor organization to insist upon the Government's adopting the plan of national ownership and joint control of the industry recommended by the majority report of the coal commission. The resolution rejected the Government's scheme for the governance of the industry "as a scheme contrary to the best interest of the Nation." The vote on the resolution was 4,478,000 for and 77,000 against.²

¹ Report of Proceedings at the Fifty-first Annual Trades-Union Congress, held in St. Andrews Hall, Glasgow, on Sept. 8 to 13, 1919. London, 1919. 408 pp.

² For discussion of the situation in the British coal industry see MONTHLY LABOR REVIEW for May, 1919 (pp. 109 to 114); August, 1919 (pp. 78 to 86); and October, 1919 (pp. 23 to 30).

The congress adopted a large number of resolutions, among which may be mentioned those—

Recommending that hours of labor of persons employed on manual labor should not exceed 44 per week and that systematic overtime should be declared illegal.

Demanding that the Government provide pensions for mothers "on the principle of schemes now in operation in many of the States of America."

Recommending the abolishment of the present poor-law system and the adoption of a measure such as will "secure relief in all cases where necessary without the deprivation of citizen rights and without the stigma of pauperism."

Protesting against the Government's delay in dealing with the question of old-age pensions, and demanding that the act be amended so as to provide a pension of £1 per week for all persons 60 years of age and upward.

Indorsing the attitude taken by the woodworking trade-unions in refusing to accept the system of payment by results as a condition of employment in the furniture trade.

Demanding the repeal of the conscription act and the immediate withdrawal of the British troops from Russia.

Recommending that the parliamentary committee urge upon the Prime Minister the necessity of instituting a national scheme of collective death insurance by which families and individuals may be provided with adequate funeral benefits.

Favoring the adoption of the metric system.

Calling upon the Government to deal with the shortage of dwelling houses "by making it compulsory for local authorities to prepare and carry out immediately adequate housing schemes in their particular areas" and "by the Government making grants free of interest, as will enable local authorities to erect suitable houses at a reasonable cost to the people."

Demanding complete nationalization and control of the land.

Instructing the parliamentary committee to urge the Government to prepare and elaborate within a period of two years a definite policy of State purchase and management of the railways and all other forms of transport and their administration by the State under provision which will assure that those who are engaged in the industry shall have a direct share in determining the conditions under which it is to be carried on.

Declaring for nationalization of shipping, shipbuilding, and ship repairing.

Calling upon the Government to deal with unemployment "(a) by regulating national or local work so as to provide for additional em-

ployment during seasonable or local fluctuations of trade," and "(b) by providing adequate maintenance, and by organizing schemes of useful work and of training with full maintenance for all workers who can not find suitable employment."

Requesting that the National Insurance Act be amended to provide (1) for an increase in the sickness benefit to £1 per week for the first 26 weeks; and 10s. for the remainder of the sickness or disablement; (2) for an increase in maternity benefits to £3; (3) for medical service and drugs to be available day and night continuously, and for the present system of payment to doctors to be revised, the cost of such increase to be met by the employers and the State.

Declaring that the Workmen's Compensation Act should be so amended as to provide among other things that workmen who are totally incapacitated through accidents arising out of and in the course of their employment be paid compensation equal to full earnings before the accident: that payment of compensation shall be made from the date of incapacity: that compensation be paid to all persons incurring or contracting injury, disease, or disability in the course of or arising out of employment.

The next annual meeting of the congress will be held at Portsmouth in September, 1920.

Development of Woman-Labor Organization in Germany During the War.

IN a special article in *Soziale Praxis*,¹ based on official statistics and various publications on woman labor, Dr. Charlotte Leubuscher discusses the development of woman labor organization in Germany during the war. The author says:

The organization of gainfully employed women may be effected in two ways: Either in unions with exclusively female membership, or jointly with male fellow workers. While the former principle of organization is prevailing among salaried employees and in numerous higher callings, the combining of male and female workers of the same occupation is by far the most frequent form of organization among manual workers. Only the sectarian trade-unions of women workers and the Christian Trade Society of Women Home Workers form an exception to this rule. It is only natural that common organization of men and women is the predominant form of organization, because women are being employed in the same occupations as men and in many instances have replaced men, and owing to this fact it is in the interest of male workers to include the female workers in their organizations. It was therefore to be expected that the increased employment of women during the war, and particularly their invasion of occupations hitherto exclusively exercised by men, would find expression in an increase of the female membership of trade-unions. To be sure, it had to be taken into account that a large number of the woman workers who during the

¹ *Soziale Praxis und Archiv für Volkswohlfahrt*. Berlin, Aug. 14, 1919.

war had taken up industrial employment with the intention of discontinuing such employment later on would show neither inclination nor understanding for belonging to a labor organization. Moreover, the favorable condition of the labor market during the war and the facility with which wage increases were obtainable made many a woman worker believe that the joining of a labor organization would involve merely a useless expenditure. Finally, it should be kept in mind that during the war the trade-unions worked with a greatly reduced staff and under difficult conditions, and were therefore prevented from carrying on an energetic propaganda among newly employed woman workers.

An official compilation recently published in the *Reichs-Arbeitsblatt*¹ indicates the fluctuation during the war of the female membership of the three most important trade-union groups, the central federations of the Free (Social-Democratic) Trade-Unions, the Christian Trade-Unions, and the Hirsch-Duncker societies. This compilation shows that the female as well as the male membership had decreased up to the end of 1915. Beginning with 1916 the former is again increasing, while the latter showed the first signs of an increase in 1917. At the end of 1917 the number of female members in the trade-union groups referred to was 382,231, as against 255,149 at the end of 1913. The increase was therefore equivalent to about 50 per cent. In 1913 the average annual female membership formed 8.6 per cent of the total membership, while the corresponding percentage for 1917 was 22.2. Up to the end of June, 1918, the Free Trade-Unions report the largest increase in female membership, viz., an increase of 138,941, equivalent to 62.1 per cent. Membership figures for the entire year 1918 are not yet available for all labor organizations, but the figures so far published by individual federations indicate that during the last year of the war labor unions experienced a further rapid increase in their membership in general and in their female membership in particular. Thus, the Factory Workers' Federation, which is affiliated with the Free Trade-Unions and is chiefly recruited from the ranks of unskilled labor, has doubled its female membership during 1918. At the end of that year it had 88,319 female members, who formed 37 per cent of the total membership. It is a noteworthy fact that 42,211 female workers enrolled as members of this federation during the last quarter of 1918. The extent of the female membership in the most important federations of the largest trade-union organization, the Free Trade-Unions (*Freie Gewerkschaften*), at the end of 1917 as compared with the end of 1913, is shown in the following table.

¹ *Reichs-Arbeitsblatt*. Berlin, Feb. 24, 1919, pp. 149ff.

TOTAL AND FEMALE MEMBERSHIP OF THE MOST IMPORTANT FEDERATIONS OF THE GERMAN FREE TRADE-UNIONS AT THE END OF 1913 AND OF 1917.¹

Federation.	End of 1913.			End of 1917.			Increase (+) or decrease (-) of female mem- ber-ship in 1917 over 1913.
	Total member- ship.	Female mem- ber-ship.		Total member- ship.	Female mem- ber-ship.		
		Num- ber.	Per cent of total mem- ber-ship.		Num- ber.	Per cent of total mem- ber-ship.	
Bakers and confectioners.....	28,754	1,656	16.2	7,296	2,457	33.7	- 47.2
Miners.....	101,986			110,454	8,847	.8	+100.0
Brewery and flour-mill workers.....	51,317	1,436	2.8	17,316	1,947	11.2	+ 35.6
Bookbinders.....	33,377	16,596	49.7	20,265	14,746	72.8	- 11.1
Printers.....	15,934	8,572	53.8	7,702	5,807	75.4	- 32.3
Factory workers.....	207,300	26,026	12.6	110,584	40,456	36.6	+ 55.4
Butchers.....	6,557	397	6.1	2,929	1,257	42.9	+216.6
Municipal workers.....	53,925	1,547	2.9	32,984	6,923	21.0	+347.5
Glass workers.....	18,251	945	5.2	7,361	800	10.9	- 15.3
Woodworkers.....	193,075	7,470	3.9	90,237	18,456	20.5	+147.1
Hatters.....	11,927	6,016	50.4	8,616	6,367	73.9	+ 5.8
Furriers.....	3,952	1,316	33.3	1,444	681	47.2	- 48.3
Leather workers.....	16,481	2,085	12.7	7,752	2,795	36.1	+ 34.1
Metal workers.....	544,934	27,373	5.0	392,930	83,266	21.2	+204.5
Pottery workers.....	16,972	3,679	21.7	5,077	2,612	51.4	- 29.0
Saddlers.....	14,855	1,029	6.9	15,306	6,717	43.9	+552.8
Tailors.....	48,712	8,857	18.2	25,470	12,923	50.7	+ 45.9
Shoemakers.....	44,363	8,665	19.5	17,453	7,738	44.3	- 10.7
Tobacco workers.....	31,713	15,449	48.7	27,706	16,958	61.2	+ 9.8
Upholsterers.....	10,164	182	1.8	2,570	734	28.6	+303.3
Textile workers.....	138,079	54,113	39.2	75,253	55,465	73.7	+ 2.5
Transport workers.....	229,427	9,201	4.0	64,725	14,967	23.1	+ 62.7

¹ Reichs-Arbeitsblatt, Berlin, Feb. 24, 1919, p. 151.

Granting that the actual number of organized woman workers seems small in view of the extraordinary increase of employment of women during the war, and although the gain in female membership does not by any means offset the great falling off of the male membership of German labor organizations, the increase of the female membership up to the end of 1917 by 50 per cent is nevertheless noteworthy. It may, moreover, confidently be expected that when the official membership figures of German labor organizations for 1918 are published they will show a further considerable increase in the percentage of female membership. Up to the end of 1917, the trade-unions covering occupations for which there was great demand in war industries show the largest increases in female membership, which go far beyond the average increase. In the Federation of Metal Workers of the Free Trade-Unions, for instance, the female membership at the end of 1917 was 83,266 as compared with 27,373 at the end of 1913, an increase of 204.5 per cent.

Another fact worthy of mention is the increased participation of woman workers in strikes and lockouts. In labor disputes initiated by the metal workers' federation, for example, the participation of woman workers rose from 2,663 (4.6 per cent) in 1914 to 470,460

(29.8 per cent) in 1917. In those initiated by the German Wood Workers' Federation, 1838 (7.4 per cent) female workers participated in 1914, and 38,650 (24.8 per cent) in 1917. It must, however, be admitted, that of the latter number only 17,791, or 46.1 per cent, were organized.

That organization of woman workers has lagged far behind that of their male fellow workers may be attributed chiefly to the unresponsive attitude of the former toward efforts at organization, above all to the lack of understanding and interest for trade-unionism of the majority of the women who are doubly burdened by occupational work and their household duties, and, secondly, to the fact that most women look upon industrial employment as a mere transitory stage in their lives. The reasons which cause the trade-unions to put obstacles in the way of extensive organization of woman labor are much harder to analyze. They may be due to the inward attitude of the trade-unions in general and of male workers in particular to the problem of woman labor. In a series of articles in *Sozialistische Monatshefte* dealing with the problems of industrial woman labor, Max Quarek, a member of the Reichstag, attributes the small success of the efforts for organizing woman labor to the fact that the trade-unions do not give sufficient consideration to the interests of woman workers, and that the male workers show little understanding of their fellow workers of the other sex and frequently assume even a hostile attitude toward them. These imputations of Quarek were emphatically repudiated in the same journal by a number of prominent trade-union leaders. But the perusal of some of the articles written in defense of the trade-union point of view makes it evident that although the trade-unions can not be accused of consciously neglecting the interests of woman workers, male organized labor looks with disfavor upon the extension of woman labor and above all upon the branching out of women into fields of industrial labor hitherto considered the exclusive domain of male workers. They either fear that an influx of female labor will overcrowd the labor market and lower wages or that certain occupations will prove injurious to women, or consider it undesirable from the point of view of the working classes that an increasing number of women who have to attend to household duties should seek industrial employment.

To-day there are only very few trade-unions which on principle disapprove of industrial employment of women and consequently do not look favorably on organization of woman workers. But their attitude is due to reasons inherent in the nature of their trade. Thus, the Federation of Building Trades Workers, which in the summer of 1916 made an investigation into the extent, nature, and wages of

woman labor, resolved not to organize woman workers employed in their trades during the war. This resolution was based on the assertion that work in the building trades is unsuited for women; that, therefore, the endeavor should be made to dispense with woman labor as soon as possible; and that nothing should be undertaken that could be looked upon as promotion or approval of such labor. A like disapproving attitude toward woman labor has always been manifested by the miners' organizations of Germany. Although during the war they have allowed women to be employed in work above ground, they are advocating complete prohibition of the employment of women in mining. The number of organized women in mining has therefore remained insignificant even during the war. The nonmilitant waiters' organizations are on principle opposed to permitting women to join their unions because they see competition by unmoral means in the employment of barmaids and waitresses. It is, however, obvious that the apprehensions quoted here, which are justified to a great extent, and are by no means inspired by narrow-minded trade jealousy, are liable to produce discord within the trade-unions with respect to their attitude toward the problem of woman labor and thus check their zeal in promoting the interests of woman workers. But even if this should not hold good in so far as the directorates of the trade-unions are concerned, it can not be denied that the unfriendly attitude of her male fellow workers has kept many a woman worker from joining a labor organization.

A number of trade-unions have acknowledged the growing importance of woman labor by developing their benevolent institutions—above all, through the introduction of maternity insurance. As propaganda among working women for the idea of organization the Central Federation of the Free Trade-Unions since 1916 publishes a women's trade-union journal (*Gewerkschaftliche Frauenzeitung*) and several federations issue women's supplements to their journals.

The future of the organization of woman workers naturally is closely connected with the development of woman labor, which can not be surveyed to-day. At the present time there is a marked retrograde movement of woman labor, owing to extensive dismissals of woman workers in war industries and the general stoppage of production due to lack of raw materials and fuel. One must, however, reckon with the fact that in the future the pressure of economic conditions will force many more women than before the war to seek gainful employment in industry. Whether labor organizations will succeed in gaining and holding these women as members can not be predicted. A further development of the benevolent institutions of the trade-unions, with a view to the special interests of female mem-

bers, especially the general introduction of maternity insurance, as proposed by Paul Umbreit, would certainly attract a larger number of women to the trade-unions. In any case it may be assumed that the strong participation of woman workers during the war in wage movements has had the result also that a great many of the unorganized woman workers have become familiar with the nature of trade-union action. Therefore, it may be confidently expected that in the future women will be more inclined than formerly to active participation in labor disputes,

STRIKES.

The Australian Shipping Strike.

ACCORDING to an article in a recent periodical,¹ the Australian shipping strike, which was finally settled the last of September, 1919, was of interest for two reasons: It was a fair indication of the existing state of industrial feeling in Australia and furnished a more or less accurate gauge of the influence of revolutionary ideas. To these may also be added the effect of the manner in which the whole matter was handled.

The strike arose from a demand on the part of the Seamen's Union for higher wages and improved working conditions. In December, 1918, after a long and expensive contest, the seamen secured a monthly wage of £12 5s.² as against £11, which they had been receiving. The men were dissatisfied with the award, especially in view of the fact that the cost of living continued to rise, as did also the profits of shipping owners, which in a majority of cases show an increase of 80 per cent since 1914.

In April, 1919, the seamen made a new demand, the main provisions of which were: "An able-bodied seaman to receive £14 a month, with equivalent pay to other ranks; a 6-hour day in port; accommodation on the ship to be improved to a standard embodied in the Commonwealth Navigation Act but not yet brought into force; menu to be improved in accordance with the standard adopted for the Navy; overtime for trimming coal and working cargo; insurance guaranty of £500 to be paid to next of kin of seamen dying at sea."

This demand was in reality an appeal against the previous award, a proceeding in opposition to a recent ruling by the Australian arbitration court, which provided that an award of the court could not be altered during the period for which it was made. The direct actionists in the labor ranks desired to break the arbitration system, and the secretary of the Australian Seamen's Union, Mr. Thomas Walsh, decided to call out the men to make a test case of the jurisdiction of the court.

¹ The New Statesman, London, Dec. 20, 1919, pp. 343, 344.

² Owing to the fluctuations in the value of English money conversions are not made into American money. Normally the par value of the British pound sterling is \$4.87 and of the shilling 24.3 cents.

The public, while generally sympathetic with the seamen in their demands for better working conditions, was as generally determined that they should not ruin the arbitration system to secure them.

The Federal Government, which acted for the defense because the shipping was still controlled by the Navy Department for war purposes, in order to vindicate the arbitration system refused any concessions to the men except through the arbitration court after evidence had been taken. So, as the writer of the article points out, a situation was created in which "the strike leaders, inspired by the theory of direct action, refused to have anything to do with arbitration. The authorities, inspired by the theory of arbitration, refused to listen to any terms which had not been awarded by a court." And he adds the opinion that "if each party had not been possessed by its own theory, the strike might have been avoided. * * * It took 14 weeks of bitter experience to exorcise these theories."

From May 19 to August 26 a complete tie-up of State shipping existed. Industry was crippled. In Victoria alone 25,000 men were out of employment and in the whole of Australia 400,000 persons suffered directly from the strike. The loss in wages approximated £3,500,000. Distress was relieved by the trade-unions, by the Government, and by charitable organizations.

During all this time no attempt was made by either the Government or the shipowners to man the ships. With the exception of a few extremists led by Mr. Walsh, secretary of the Seamen's Union, the behavior of the men was exemplary. Only when, after several unsuccessful attempts at settlement, Mr. Walsh threatened to deprive the people of fuel and light, did the Government fine and imprison him. Notwithstanding the fact that his followers made a claim for his release in each attempt to settle, there seems to have been no definite effort on their part to effect it, and he was not released until the final terms of settlement had been agreed upon.

The passivity of the Government, while criticized in some quarters, was, in the opinion of the writer, on the whole successful. The burden of the strike falling on the workers, they realized the consequences of it and the futility of the policy of direct action. They did not at any time sympathize with the attempt to destroy their arbitration system. One of the outstanding features of the strike was the attempts on the part of the official representatives of organized labor to settle it.

Finally the men agreed to return to work and to confer with the owners regarding a settlement, the terms to be filed as an award of the arbitration court. After a month of conferences between the seamen and the ship owners the following agreement was published:

- (a) All ratings to have an increase of wages of 35s. per month.
- (b) The day's work to consist of 8 hours.

(c) The men to be granted home leave in port, with a flat rate of 2s. 6 d. for overtime.

(d) Wages to be paid during illness not caused by willful neglect.

(e) Each man to have 14 days' holiday each year on full pay.

(f) Meal hours to be fixed and accommodation provided according to the Commonwealth Navigation Act where practicable, and the benefits of the Workers' Compensation Act to be made available to seamen.

In summing up the situation the writer says:

The strike undoubtedly marks a definite step in the history of the labor movement. Direct action has been put into operation with discouraging results, and the revolutionary element in the country has been shown to be extremely small. While the workers stand together there will always be a powerful influence within the party toward constitutional measures. This constitutional section was kept alive by the Government policy of passive resistance. A call for volunteers would have been interpreted as a challenge to unionism and would have given the revolutionary his chance. On the other hand, no substantial breach has been made in the arbitration system, and it is clear that a very considerable majority of the workers appreciate the benefits which it has brought to them. While they probably feel that the influences dominating the mind of the judges and officials of the court are middle-class, yet they realize that a definite attempt has been made to introduce the factor of justice into the wage bargain.

IMMIGRATION.

Immigration in November, 1919.

THE following tables, prepared by the Bureau of Immigration of the Department of Labor, show the total number of immigrant aliens admitted into the United States in each month from January, 1913, to November, 1919, and the numbers admitted in each fiscal year, 1915 to 1919, and in November, 1919, by nationality.

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES IN SPECIFIED MONTHS
JANUARY, 1913, TO NOVEMBER, 1919.

Month.	1913	1914	1915	1916	1917	1918	1919	
							Number.	Per cent increase over preceding month.
January.....	46,441	44,708	15,481	17,293	24,745	6,356	9,852	¹ 8.3
February.....	59,156	46,873	13,873	24,710	19,238	7,388	10,586	7.5
March.....	96,958	92,621	19,263	27,586	15,512	6,510	14,105	33.2
April.....	136,371	119,885	24,532	30,560	20,523	9,541	16,860	19.5
May.....	137,262	107,796	26,069	31,021	10,487	15,217	15,093	¹ 10.5
June.....	176,261	71,728	22,598	30,764	11,095	14,247	17,987	19.2
July.....	138,244	60,377	21,504	25,035	9,367	7,780	18,152	.9
August.....	126,180	37,706	21,940	29,975	10,047	7,862	20,597	13.5
September.....	136,247	29,143	24,513	36,398	9,228	9,997	26,584	29.1
October.....	134,440	30,416	25,450	37,056	9,284	11,771	32,418	21.9
November.....	104,671	26,298	24,545	34,437	6,446	8,499	27,219	¹ 16.0
December.....	95,387	20,944	18,901	30,902	6,987	10,748		

¹ Decrease.

Classified by nationality, the number of immigrant aliens admitted into the United States during specified periods and in November, 1919, was as follows:

IMMIGRANT ALIENS ADMITTED INTO THE UNITED STATES DURING SPECIFIED PERIODS AND IN NOVEMBER, 1919, BY NATIONALITY.

Nationality.	Year ending June 30—					November, 1919.
	1915	1916	1917	1918	1919	
African (black).....	5,660	4,576	7,971	5,706	5,823	636
Armenian.....	932	964	1,221	321	282	122
Bohemian and Moravian.....	1,651	642	327	74	105	21
Bulgarian, Serbian, Montenegrin.....	3,506	3,146	1,134	150	205	47
Chinese.....	2,469	2,239	1,843	1,576	1,697	181
Croatian and Slovenian.....	1,912	791	305	33	23	22
Cuban.....	3,402	3,442	3,428	1,179	1,169	78
Dalmatian, Bosnian, Herzegovinian.....	305	114	94	15	4	1
Dutch and Flemish.....	6,675	6,433	5,393	2,200	2,735	842
East Indian.....	82	80	69	61	68	20
English.....	38,662	36,168	32,246	12,980	26,889	5,282
Finnish.....	3,472	5,649	5,900	1,867	968	114
French.....	12,636	19,518	24,405	6,840	12,598	2,210
German.....	20,729	11,555	9,682	1,992	1,837	597
Greek.....	15,187	26,792	25,919	2,002	813	197
Hebrew.....	26,497	15,108	17,342	3,672	3,055	620
Irish.....	23,503	20,636	17,462	4,657	7,910	1,509
Italian (north).....	10,660	4,905	8,796	1,074	1,236	473
Italian (south).....	46,557	33,909	35,154	5,234	2,137	4,538
Japanese.....	8,609	8,711	8,925	10,168	10,056	732
Korean.....	146	154	194	149	77	8
Lithuanian.....	2,638	599	479	135	160	25
Magyar.....	3,604	981	434	32	52	16
Mexican.....	10,993	17,198	16,438	17,602	28,844	3,160
Pacific Islander.....	6	5	10	17	6	.....
Polish.....	9,065	4,502	3,109	668	732	149
Portuguese.....	4,376	12,208	10,194	2,319	1,574	1,045
Roumanian.....	1,200	953	522	155	89	48
Russian.....	4,459	4,858	3,711	1,513	1,532	188
Ruthenian (Russniak).....	2,933	1,365	1,211	49	103	18
Scandinavian.....	24,263	19,172	19,596	8,741	8,261	1,126
Scotch.....	14,310	13,515	13,350	5,204	10,364	1,794
Slovak.....	2,069	577	244	35	85	103
Spanish.....	5,705	9,259	15,019	7,909	4,224	766
Spanish-American.....	1,667	1,881	2,587	2,231	3,092	212
Syrian.....	1,767	676	976	210	231	62
Turkish.....	273	216	454	24	18	4
Welsh.....	1,390	983	793	278	608	143
West Indian (except Cuban).....	823	948	1,369	732	1,223	67
Other peoples.....	1,877	3,388	2,097	314	247	43
Total.....	326,700	298,826	295,403	110,618	141,132	27,219

Publications Relating to Labor.

Official—United States.

CALIFORNIA.—*Industrial Accident Commission. Report. July 1, 1918, to June 30, 1919. Sacramento, 1919. 167 pp.*

A brief summary of this report is given on pages 218 to 221 of this issue of the MONTHLY LABOR REVIEW.

MASSACHUSETTS.—*Bank Commissioner. Annual report, 1918. Part II relating to cooperative banks, savings and loan associations, and credit unions. Boston, 1919. 383, liv pp. Public document No. 8.*

On October 31, 1918, 186 cooperative banks were in operation and the aggregate of their assets was \$140,201,033.98, which was an increase of \$13,628,865.02 during the year, the largest increase in any one year since the inception of the cooperative bank system in 1877.

—*Bureau of Statistics. Ninth annual report on union scale of wages and hours of labor in Massachusetts, 1918. Boston, October 1, 1919. 141 pp. Labor Bulletin No. 128 (being Part II of the annual report on the statistics of labor for 1919).*

The data for this report were obtained principally as of July 1, 1918, when the schedules of inquiry were sent to most of the local trade-unions in the State whose members were known to be working under a time-rate system. As used in this report, the term "time-rates of wages" signifies the wages agreed upon in return for services for a specified period, and should not be confused with actual earnings since the earnings of employees depend both upon the rates of wages and the number of hours, etc., for which payment is made. It is explained that except where otherwise noted this report has reference only to the minimum rates of wages and maximum number of hours which have become effective in the various organized trades, and does not purport to show the extent to which there may be individual variations from the established scale. The rates of wages and hours of labor in this report are grouped by trades, occupations and municipalities.

—*Homestead Commission. Sixth annual report, 1918. Boston, 1919. 29 pp. Public Document No. 103.*

This report is a continuation of that of 1917, which is noted on page 316 of the January, 1919, issue of the MONTHLY LABOR REVIEW. It gives an account of the progress which has been made in the experiment commenced at Lowell of building houses, at an estimated cost of from \$1,952.85 to \$2,381.65, which could be sold to workers on easy terms at from \$2,400 to \$3,100. The experiment has been made on a parcel of 7 acres of land which was divided into 47 building lots. The first appropriation—of \$50,000—has purchased the land and built 12 houses, which, with two exceptions, were sold before the contractor had turned them over to the commission. The remaining two were sold very shortly afterwards. Two more houses were very near completion, which would exhaust the appropriation. To complete the experiment the commission recommends bills providing for another appropriation of \$100,000 with which to build 33 more houses, and the employment of a permanent secretary on salary. The report also discusses the importance of proper housing, saying that "no man

who has not at least some minimum standard of decency realized in his own home can make the type of citizen we want and need." and states that it is not "as a commission favorable to government ownership of houses, whether State or municipal, at this time." It also contains brief reports of the city and town planning board.

NEW YORK.—*Industrial Commission. Annual report for the 12 months ended June 30, 1918. Albany, 1919. 261 pp. Legislative document No. 12.*

The 1917-18 report of the bureau of workmen's compensation, which constitutes Part II of this report, is reviewed on pages 221 to 223 of this issue of the MONTHLY LABOR REVIEW.

PANAMA CANAL.—*Governor. Annual report for the fiscal year ended June 30, 1919. Washington, 1919. 366 pp.*

This volume contains the general administrative report and the reports of the various departments of the Canal Zone. The sections of special interest to labor deal with labor conditions, statistics of employment, housing, wage adjustments, and wages of West Indian employees (commonly known as "Employees on the silver roll"). Two tables give silver employees' wages, 1906 to June 18, 1919. The chief health officer submits tables of sickness and death statistics. It is stated that on June 30, 1919, the total force employed by the Panama Canal and the Panama Railroad Co. on the Isthmus was 20,361, as compared with 19,265 on June 30, 1918.

PENNSYLVANIA.—*Health Insurance Commission. Report to the General Assembly of the Commonwealth of Pennsylvania. Harrisburg, January, 1919. 246 pp.*

A digest of this report was published in the July, 1919, issue of the MONTHLY LABOR REVIEW, pages 220 to 226.

VIRGINIA.—*Bureau of Labor and Industrial Statistics. Twenty-second annual report, 1919. Richmond, 1919. 48 pp.*

Presents the results of an investigation of the wages and hours of labor of women wage earners in the mercantile establishments of Virginia. The investigation covered department stores (including 5-and-10-cent stores, 25-cent stores, etc.), and dry goods and millinery establishments, and was confined to four cities, viz, Richmond, Norfolk, Lynchburg, and Roanoke. The figures are for December 31, 1918, but will probably hold good for the year 1919, as there has been no material change in wages in these establishments during that year.

Out of a total of 2,468 persons employed in 138 establishments, covered by the investigation, 1,257, or more than 50 per cent, receive less than \$12 per week; 718, or nearly 30 per cent, receive less than \$10 per week; 223 receive less than \$8 per week, and 19 receive under \$3 per week.

Although there are a large number of mines and quarries outside of the coal industry, the inspection of the mines in Virginia is confined exclusively to the coal mines. For the year ending September 30, 1919, there were 403 inspections made, covering 247 mines, and 5 prosecutions were instituted for violations of State mine law. For the same period 945 coal-mine accidents were reported. Of these 235 were caused by fall of roof (coal, slate, rock, etc.), 19 being fatal, and 216 nonfatal; 321 were caused by mine cars and locomotives, 9 being fatal, and 312 nonfatal.

UNITED STATES.—*Congress. Senate. Committee on manufactures. Shortage of coal. Hearings pursuant to S. Res. 163, a resolution directing the committee on manufactures to investigate the causes of the shortage of coal and sugar. Washington, 1918. 1788 pp. (3 vols.) 65th Congress, 2d session.*

UNITED STATES.—*Congress. Senate. Committee on the District of Columbia. High cost of living in the District of Columbia. Report. [Pursuant to S. Res. 150.] Washington, December 8, 1919. 32 pp. Report No. 327. 66th Congress, 2d session.*

— *Council of National Defense. Third annual report, for the fiscal year ended June 30, 1919. Washington, 1919. 160 pp. Charts.*

Includes sections describing the work of the committee on labor, the States councils section, and the reconstruction research division. Among the important activities of the committee on labor was the maintenance of existing safeguards for the conservation and welfare of the workers and the formation of the emergency employment committee for soldiers and sailors to aid discharged soldiers and sailors to secure employment upon their return to civil life. The latter work was undertaken in cooperation with the United States Employment Service.

The report presents in detail the work accomplished by the Reconstruction Research Division, and states that "there are in the files of this division more coherent and dynamic material dealing with reconstruction and readjustment matters in this and foreign countries than is elsewhere to be found in the United States." The States councils section reports that as a result of its efforts to solve the housing problem in congested localities, in so far as it did not necessitate the actual construction of houses, 111 local committees were at work on the housing problems of 24 States and 65 homes registration services were in operation. These committees dealt, among other things, with complaints of rent profiteering. It is stated that through the instrumentality of these committees housing conditions in crowded centers of war industry were considerably alleviated. In an appendix is given an analysis of the duties and functions of the council.

— *Department of Commerce. Bureau of the Census. Birth statistics for the birth registration area of the United States. 1917. Third annual report. Washington, 1919. 299 pp.*

— *Department of the Interior. Bureau of Education. Bibliography of home economics. Washington, 1919. 103 pp. Bulletin No. 46.*

— — — *Educational work of the Young Men's Christian Associations, 1916-1918, by William Orr. Washington, 1919. 60 pp. Bulletin No. 53.*

According to this account of the educational activities of the Young Men's Christian Association, the educational work originated in the apparent need of it among the boys and men who came under the observation of the various secretaries. It has been the aim of this educational service "to furnish and to make easily accessible to men and boys, mainly those in industry, such courses of instruction as would enable them to become better citizens and workmen." While both general and vocational training are given, emphasis is laid upon vocational instruction and the work is such as supplements rather than supplants the work offered by the public schools along these lines.

The field of instruction is wide, including city associations, railroad branches, county work, Army and Navy branches, colored work, boys' classes, and an industrial department, in the United States, and a foreign department which has charge of the educational classes in foreign countries. A large part of the report is given to an interesting account of the educational work of the Y. M. C. A. among the forces both at home and abroad during the war.

The importance of the industrial department has greatly increased during the war due to the concentration of large numbers of workers in the industrial centers. The association has striven to foster better relations between employers and employed by means of reading courses, discussion groups, and lectures, and to provide instruction in English and civics for immigrants. The

report shows that "53 city associations have 63 secretaries giving full time to organized industrial extension work"; 4,500 volunteers serve regularly as teachers and leaders of industrial workers; 9 secretaries are working with immigrants in ports of landing and in depots; and in addition, there are 132 buildings with 187 secretaries operating in single industries and groups of industries as follows:

Industry.	Buildings.	Secretaries.
Coal.....	35	46
Lumber.....	19	22
Cotton.....	19	26
Metal mining.....	16	18
Iron and steel.....	12	25
Shipbuilding and munition plants.....	31	50

Over 200,000 industrial workers belong to the association and are thus able to take advantage of the educational opportunities offered at the various Y. M. C. A. buildings, while 5,000,000 industrial workers are reached through the association extension work. More than 60,000 industrial workers receive instruction in English and civics every year, and approximately 1,000,000 are reached by educational lectures. Special mention may be made of the work being done by the industrial service movement of the association in enlisting the services of young prospective business men as volunteers in the work among foreigners. Through contact with workers in these classes they come to have a more sympathetic understanding of foreigners and of the human side of industry generally, which is of great practical advantage when they enter industrial life later.

UNITED STATES.—*Department of the Interior. Bureau of Mines. Experiment stations of the Bureau of Mines. Washington, 1919. 106 pp. Bulletin 175.*

Account of the work of the experiment stations of the Bureau of Mines, the purpose of which is to investigate economy, efficiency, and safety in mining, and to make public the results of the investigations. The stations also serve an educational purpose by making easily accessible to both miners and operators a knowledge of the work being done by the Government in increasing production and making mining a safe occupation. During the fiscal year ended June 30, 1918, 38 mine accidents were investigated, 30 in coal and 8 in metal mines.

—*Department of Justice. Annual report of the Attorney General of the United States for the year 1919. Washington, 1919. 647 pp.*

The report, which is for the year ending June 30, 1919, refers to a decision by the Supreme Court in a case involving a definition of the words "time of employment" as used in a statute (act of June 25, 1910, 36 Stat. 423) which denies to inventors compensation for the use by the United States of patented articles, where the invention was perfected during the time of the employment of the inventor in the service of the Government, it being held that the fact that the invention was completed in hours when the inventor was not actually on Government duty was immaterial.

Proceeding under the anti-trust statutes, the Department procured the conviction of so-called business agents of Chicago labor unions on the charge of combining and conspiring to interfere with interstate commerce by preventing the unloading in Chicago of goods shipped from other States. Other cases under this head affected manufacturers and dealers, one resulting in the disso-

lution of the Corn Products Refining Co. Another case in which conviction was secured involved dealers in tile, etc., who formed an association of restricted membership and then used threats against manufacturers who sold to non-members, an agreement also being entered into with the Tile Layers' Union under which the latter were to set tiles only for members of the association. Prosecution in a number of cases was delayed on account of unsettled conditions due to the war.

Some account is given of the activities of the Department of Justice in its efforts to reduce the high cost of living. The value of additional legislation enacted in 1919 is pointed out, which makes it "now possible to deal vigorously with all cases of profiteering." Prosecutions for hoarding are also possible, and the report enumerates seizures of commodities in 18 States.

UNITED STATES.—*Department of Labor. Seventh annual report of the Secretary of Labor for the fiscal year ended June 30, 1919. Washington, 1919. 304 pp.*

This report includes accounts of the International Labor Conference and the National Industrial Conference; of the war labor administration and of the various bureaus of the department; also departmental recommendations concerning the following matters: Early legislation with a view to reviving and continuing the activities of the working conditions service; an amendment to existing statutes by which greater elasticity might be secured through temporary administrative assignments for the relief of embarrassing situations which arise through the increase of departmental work; the establishment of a system of old-age retirement for Government employees; the enactment of legislation to permit the continuation of the work of the United States Training Service in training wage earners; an increase from \$4 to \$6 per diem for subsistence for employees of the department engaged in travel; and legislation looking toward the creation of new opportunities for employment by a more adequate use of the land and of natural resources.

— *Federal Board for Vocational Education. Third annual report. 1919. Washington, 1919. Vol. I.—Vocational education. Vol. II.—Vocational rehabilitation.*

As indicated above this report consists of two volumes, the first dealing with the general subject of vocational education, the second treating specially of vocational rehabilitation. Part I of the general presentation of vocational education includes a discussion of the progress and needs of vocational education, in which are included national needs, agricultural education, home economics, commercial, industrial, and trade education, together with an account of the present status of trade and industrial education for girls and women, employment management, and a list of publications issued by the board since June 30, 1918. Part II is a summary of the progress of vocational education by States, while Part III is a statistical report of the administration of the Federal Vocational Education Act for the year ending June 30, 1919.

Volume II of the report gives an account of the vocational rehabilitation work done by the board, including a summarization of the original act and the changes effected by the act of July 11, 1919. The systems of training are described in some detail and are accompanied by a statistical report compiled from weekly reports of the district vocational offices to the central office.

— *Industrial Conference. Preliminary statement of the industrial conference called by the President. Washington, 1919. 12 pp.*

This preliminary statement was published in full in the January, 1920, issue of the MONTHLY LABOR REVIEW, pages 60 to 68.

UNITED STATES.—*Interstate Commerce Commission. Thirty-third annual report. Washington, December 1, 1919. 173, vi pp.*

A summary of casualties reported by the bureau of safety shows that during the calendar year of 1918 the total number of persons killed in connection with the operation of trains was 8,697, and of injured, 64,144, divided as follows: Trespassers, 3,255 killed, 2,805 injured; employees, 2,928 killed, 47,556 injured; passengers, 471 killed, 7,316 injured; persons carried under contract, such as mail clerks, Pullman conductors, etc., 48 killed, 766 injured; other nontrespassers, 1,995 killed, 5,701 injured. In addition, there were 589 killed and 110,431 injured in nontrain accidents. As compared with the figures for 1917 there was a decrease of 2 in the number killed and 176 in the number injured in train accidents and an increase of 39 killed and a decrease of 1,851 injured in nontrain accidents.

— *National Research Council. Third annual report. 1918. Washington, 1919. 74 pp.*

The council was established in 1916 under the charter of the National Academy of Sciences. It acts as the department of science and research of the Council of National Defense. Its chief work since the signing of the armistice has been to utilize the various preliminary studies made during the war period for the formulation of a definitive scheme of organization and a plan of work in keeping with the demands of existing conditions. Besides its war activities, the report treats matters of interest in the progress of the council during the past year, among which are the development of the work of the research information service, the organization of the International Research Council, the work of the industrial section, and the preparation of a plan of permanent organization.

— *Shipping Board. Third annual report for the year ended June 30, 1919. Washington, 1919. 213 pp.*

Includes an account of the work of the industrial relations division of the Emergency Fleet Corporation, describing the labor adjustment policy, education and training work, provision for health and sanitation, and efforts along the line of safety engineering. The last section reports a total of \$2,800,000 in wages saved due to prevention of minor accidents, and a total of \$1,000,000 insurance premiums returned because of safety organization. A table giving the number of shipyard employees by months from January, 1918, to June, 1919, shows a total of 310,559 working on ship construction in November, 1918, when the highest number was employed.

— *Treasury Department. Federal Farm Loan Bureau. The Federal farm loan act, with amendment approved January 18, 1918. Washington. August, 1919. 29 pp. Circular No. 4. (Revised.)*

Official—Foreign Countries.

ARGENTINA.—*Departamento Nacional del Trabajo. Ministerio del Interior. Anuario Estadístico 1917. Buenos Aires, 1919. 269 pp. Boletín No. 42.*

This is the regular annual report of the Labor Department of Argentina, and contains statistical and descriptive data relative to wages, hours of labor, strikes, home work, prices, collective insurance, etc., for the year 1917, and in some cases comparative data covering the period 1907-1917.

There has been a slight reduction in daily wages earned, data collected showing that from 1914 to 1917 wages of males in Argentine money fell from \$3.81 to \$3.70, and of females from \$2.38 to \$2.26. (The Argentine gold dollar is equivalent to 96.5 cents in U. S. money; the value of a dollar in currency

(*moneda nacional*) varies, but is approximately one-half gold value.) Monthly wages, however, increased in 1917 as compared with 1916, and changes in these, both sexes considered, have been quite favorable to this class of employees. In 1916 these wages reduced to a daily basis indicated that men so employed received 29.2 per cent, and women 50.8 per cent less wages than day laborers, and in 1917 men so employed received only 8.6 per cent less, while women received 3.5 per cent more than day laborers. Monthly wages of men, when reduced to a daily basis, increased 30.5 and those of women 109 per cent in 1917 over 1916. There has been but slight change in the hours of labor from 1914 to 1917, the average hours of work for each of the four years being, respectively, 8.42, 8.58, 8.56, and 8.46 per day.

There were 138 strikes in the capital, involving 136,062 persons. Of these 16 were general strikes. The loss in wages is estimated at \$8,152,631 (Argentine money). Railroad employees to the number of 66,906 were on strike, the wage loss being estimated at \$5,172,526.

A preliminary report for 1918 shows that there were 196 strikes, involving 133,042 persons, in the capital.

AUSTRALIA. *Department of the Treasury. Pensions and maternity allowance office. Invalid and old-age pensions. Statement for the 12 months ended 30th June, 1919. Melbourne, 1919. 10 pp.*

Under the provisions of the Invalid and Old-Age Pensions Act, 1908-1917, there were, on June 30, 1919, 95,969 persons (38,261 men and 57,708 women) receiving old-age pensions, and 31,999 persons (15,144 men and 16,855 women) receiving invalid pensions, a total of 127,968. These figures represent an increase of 582 and 2,087, respectively, over the preceding year. Of the old-age pensions, 9,250, and of the invalid pensions, 5,099, were granted during the year ending June 30, 1919. On account of these pensions payments of £3,880,865 (the normal value of the English pound is \$4.8665) were made, an increase of £126,888 over 1918. In addition, £55,750 were paid to benevolent asylums for maintenance of pensioners, making a total payment of £3,936,615, an increase over 1918 of £143,578. It is stated that the average fortnightly rate of pensions, which for both classes is fixed at a maximum of 25 shillings, was £1 4s. 1.18d. for old age, and £1 4s. 6.06d. for invalidity, a combined average of £1 4s. 2.4d. Approximately 85 per cent of the old-age pensioners, and 93 per cent of the invalid pensioners received the maximum allowance. The cost of administration for the year is given as £63,280, an increase of £8,925 over 1918. It is shown that since the old-age pension act came into effect on July 1, 1909, 174,282 claims for pensions have been granted. The invalid-pension act became operative on December 15, 1910, since which time 47,554 claims have been granted. Old-age pensions may be granted to persons over 60 years of age, except that men between 60 and 65 years are not eligible unless they are permanently incapacitated for work. That portion of the act which authorizes payment to women on attaining the age of 60 years came into operation on December 15, 1910.

— *Pensions and maternity allowance office. Maternity allowances. Statement showing number of claims granted and rejected, expenditure, and cost of administration during the 12 months ended 30th June, 1919. Melbourne, 1919. 3 pp.*

During the year allowances were granted in 124,016 cases, and rejected, for various causes, in 510 cases. The total amount paid to mothers was £620,080. (The normal value of the English pound is \$4.8665.) The cost of administration is given as £11,369, or an average of £1 16s. 8d. for each £100 of maternity allowance paid.

AUSTRALIA.—*Department of the Treasury. War pensions. Statement for the 12 months ended 30th June, 1919. Melbourne, 1919. 8 pp.*

It is shown in this report that pensions were granted in 82,938 and rejected in 12,644 cases. At the close of the period a total of 181,529 pensions were in force, of which 50,436 were in respect of deceased members of the forces. The total amount paid to pensioners was £4,828,072. (The normal value of the English pound is \$4.8665.) The average fortnightly rate of pension to incapacitated members of the forces is given as £1 10s. 0.58d., and to dependents of deceased and incapacitated members as 18s. 11.81d., the average for all pensioners being £1 3s. 4.11d. The total cost of administration was £97,788, or an average of £2 6d. for each £100 of pensions paid.

— (QUEENSLAND).—*Department of Labor. Report of the director of labor and chief inspector of factories and shops for year ended 30th June, 1919. Brisbane, 1919. 47 pp.*

Tables show that there were 3,180 registered factories employing 29,827 persons, and 5,281 stores, employing 10,587 persons. There were 89 accidents reported in the factories of Brisbane, and 229 in factories outside Brisbane. The labor exchanges report 37,930 registrations, a demand for 15,451 persons, and 13,768 placements. The female labor exchange reported 2,578 registrations, demand for 2,896, and 1,882 placements.

— (VICTORIA).—*Labor Department. Report of the chief inspector of factories and shops for the year ended 31st December, 1918. Melbourne, 1919. 30 pp. Price 1s. 3d.*

States that 7,994 factories, employing 104,242 persons, and 25,920 shops, employing 27,520 persons, were registered in 1918. A table of average weekly wages in the various trades for which special boards have been appointed shows a range of from 24s. 10d. in the underclothing trade to 86s. 2d. in the ice trade. In the trades not under special boards the range was from 17s. 9d. in the artificial flower trade to 93s. 7d. in slaughtering for export. It is stated that the wages-board determinations are in operation over only parts of Victoria and that, accordingly, there are some employees in trades for which boards have been appointed who are not affected by the determinations. The average wages of these range from 12s. 4d. in dispensaries to 82s. 9d. in brass works. There were 459 accidents, 8 of them fatal, in factories during 1918. Of the total number 356 were injuries to the hands.

BRAZIL (SÃO PAULO).—*Departamento Estadual do Trabalho. Seção de Informações. Os Accidentes no Trabalho em 1918. São Paulo, 1919. 53 pp.*

This is a detailed report of industrial accidents in the State of São Paulo, Brazil, for the year 1918, with comparative statistical data for the years 1912–1917 inclusive.

CANADA.—*National Industrial Conference. Ottawa, September 15–20, 1919. Official report of proceedings and discussions together with various memoranda relating to the conference and the report of the Royal Commission on Industrial Relations. Ottawa, 1919. Liv. 23½. 28 pp. Price, 20 cents.*

An account of the conference was published in the MONTHLY LABOR REVIEW for November, 1919, pages 51 to 62.

— (QUEBEC).—*Department of Public Works and Labor. General report, for the year ending 30th June, 1919. Quebec, 1919. 200 pp. Illustrated.*

Includes the administrative and statistical reports of the various branches of the provincial labor department; namely, factory inspection offices, provincial employment bureaus, registrar of councils of conciliation and arbitration, and the fair wages officer. Attention is called to the act amending the Quebec Industrial Establishments Act relating to children and the act providing for

the fixing of a minimum wage for women, two new laws that have become effective during the year.

The military employment bureaus reported that 8,189 soldiers without employment were registered, 4,875 were referred to positions, and 3,799 gave notice that they were placed.

CUBA.—*Secretaria de Agricultura, Comercio y Trabajo. Legislacion obrera de la Republica de Cuba. I. Leyes y disposiciones vigentes. II. Proyectos pendientes ante el congreso. Havana, 1919. 290 pp.*

A compilation of the labor laws, including decrees and regulations promulgated thereunder, in force in Cuba. Part II includes the text of proposed laws now pending in the national congress.

GREAT BRITAIN.—*Board of Education. Report of the standing joint committee representative of the county councils association, the municipal corporations association, the association of education committees and the London County Council, and of the National Union of Teachers on a provisional minimum scale of salaries for teachers in public elementary schools. London, 1919. 8 pp. Cmd. 443. Price, 1d. net.*

— *Chief medical officer. Annual report for 1918. London, 1919. 258 pp. Cmd. 420. Price, 1s, 3d. net.*

A section is devoted to the school medical service and juvenile employment, the subject being considered in two parts: The employment of school children out of school hours; and Arrangements for the physical well-being of adolescents in employment, in connection with continuation schools, joint industrial councils, industrial concerns, or juvenile unemployment centers. All of these matters now come within the provisions of the school medical service, the scope of which has been widened by the education act of 1918, whose provisions concern not only children in daily attendance at school, but also those children and young persons who are emerging from school to enter full-time industrial or other employment.

— *Board of Trade. Return "relating to the output of coal at coal mines in the United Kingdom during periods of four weeks, commencing with the period ended the 21st day of June, 1919, and to the number of persons employed at the end of those periods, in the various districts." London, 1919. 2 pp. 175-IV. Price, 1d. net.*

— *Return "relating to the weekly output of coal from coal mines in Great Britain, commencing with the week ended the 31st day of May, 1919." London, 1919. 2 pp. 176-III. Price, 1d. net.*

— *Interdepartmental Committee on Meat Supplies. Report of the committee to consider the means of securing sufficient meat supplies for the United Kingdom. London, 1919. 30 pp. Cmd. 456. Price, 3d. net.*

— *Coal Industry Commission. Vol. III. Appendices, charts, and indexes. London, 1919. 318 pp. Cmd. 361. Price, 6s. net.*

Volumes I and II were noted in the January, 1920, issue of the MONTHLY LABOR REVIEW, page 291, and articles dealing with the situation in the British coal industry and reports of the Coal Industry Commission were published in the following issues: May, 1919, pages 109 to 114; August, 1919, pages 78 to 86; and October, 1919, pages 23 to 30.

— *Home Office. Protection of hoists. London, 1919. 20 pp. Illustrated. Safety pamphlet No. 2. Price, 6d. net.*

— *Laws, statutes, etc. Manuals of emergency legislation. War material supplies manual. 4th edition. Revised to June 30, 1919. London, June, 1919. 253 pp. Price, 7s. 6d. net.*

Comprises an Introduction; Alphabetical table of war material supplies, subject to control, and release from control, since March 25, 1919; Defense of the

realm regulations enabling the making of war material supplies orders, as amended to June 30, 1919, with notes; War material supplies orders, in force on June 30, 1919, with notes; Priority of orders; and Appendixes giving non-ferrous metal industry act and rules; Restrictions on importation or exportation of war material supplies; Relief from liability under contracts affected by control of war material supplies; and Proof, construction and citation of war material supplies orders, and of the enabling regulations.

GREAT BRITAIN.—*Ministry of Health. Housing. Schemes submitted by local authorities and public-utility societies up to the 27th September, 1919; schemes submitted up to 31st October, 1919. London, 1919. 83, 130 pp. Cnd. 397, 446. Price, 6d., 9d net.*

The report covering the period up to October 31, 1919, states that 5,903 schemes, covering 46,290 acres, had been submitted by 1,282 local authorities and 58 public-utility societies. A total of 2,159 sites, covering 23,700 acres, were approved by the Ministry of Health. Of 1,266 schemes for layouts which were submitted, 747 were approved. It is also stated that 922 applications, covering 43,917 houses, for the approval of house plans had been received, in addition to some cases in which type plans were submitted, and that 599, providing for 31,013 houses, were approved. The cost of the land for 1,316 schemes, covering 14,693 acres, for which the price has been approved, is given as £2,799,040, an average cost per acre of £191. (The normal value of the pound is \$4.8665.) The average cost of 7,121 houses included in tenders which have been approved is £718. Of this number 3,630 are non-parlor houses, the cost of which average £660, and 3,491 are parlor houses, the cost of which average £779. Of the 7,121 houses, 6,234 were in urban districts and represent an average cost of £722, while 887 were in rural districts and show an average cost of £691. At the time of the report work was in progress on schemes which when completed will provide 20,822 houses. In addition, work was in progress on nearly 4,644 working-class houses not included in schemes under the housing act.

— — — *The housing problem in Germany. Report prepared in the Intelligence Department of the Local Government Board. London, 1919. 89 pp.*

The report deals with the conditions of housing in Germany and the measures which have been proposed for remedying existing defects. Some account is also given of the past history of housing. The facts relate mainly to the period before the revolution; but the report states that the evidence indicates that, given stability of government, the measures to be adopted will follow generally those contemplated before the change.

Two of the most instructive measures in connection with housing for the working classes in Germany in recent years have been the provision of capital through thrift institutions and the use made of public-utility societies. * * *

Another institution, the municipal-house registry, which was introduced in some towns before the war, has since been much extended because of the urgency of the housing problem. The registry is, for houses, the counterpart of the employment exchange for labor. Vacant houses or apartments are registered, and prospective tenants are furnished with information regarding them.

The report points out that the municipal-house registry is advocated not only because of the direct service to the community in providing a center where offers of, and demands for, houses, tenements, or apartments can be brought together, but also because in this way the local authority can readily keep in touch with the housing conditions of the district. It is urged that housing inspection (in which Germany has hitherto been backward) should be closely connected with the house registry.

This idea is incorporated in the Prussian housing law of 1918, by which each urban authority of size is required to establish a housing office to deal with in-

spection and other housing matters of the local authority, and while not actually required, it is contemplated that a house registry shall form part of every important housing office. * * *

The war, as here, has gravely accentuated the housing problem. House building was practically stopped. The shortage of accommodation became acute and all manner of devices were adopted in order to make it good; prohibitions (not by any means always observed) against the use of cellars and attics were withdrawn, and shops which were empty and even schools were compulsorily converted into dwelling places, all of which, however, did not more than slightly relieve the pressure.

The estimates of the number of new dwellings required differ very much, those given for the need of new dwellings for the whole Empire varying between 250,000 and 800,000, according to this report.

GREAT BRITAIN.—*Ministry of Health. Manual on the conversion of houses into flats for the working classes. London, 1919. 12 pp. 16 plans. Price, 1s. net.*

— *Ministry of Labor. Training department. For the training of apprentices whose apprenticeship has been interrupted by service in H. M. forces. Scheme No. 34. Apprentices in the iron founding and light castings industry (Scotland). Scheme No. 35. Apprentices in the sheet and plate-glass industry. [London, 1918.] 4 pp. each.*

— *Ministry of Pensions. Royal warrant for the pensions of soldiers disabled, and of the families and dependents of soldiers deceased, in consequence of the great war. London, 1919. 18 pp. Cmd. 457. Price, 3d. net.*

— *National Health Insurance Joint Committee. Medical research committee. Fifth annual report, 1918-1919. London, 1919. 90 pp. Cmd. 412. Price, 6d. net.*

Includes a section devoted to the Industrial Fatigue Research Board, which reports that the following investigations are in progress: In the department of experimental psychology at Cambridge, an experimental investigation of existing physiological and psychological tests of fatigue and an attempt to devise more satisfactory tests; at some important iron and steel centers, investigations of the physiological effects of heavy work and of work involving exposure to high temperatures; in the cotton industry, a study of the physiological effects of work involving constant attention, heavy demands on the sight, and exposure to hot and humid conditions; in the silk industry, investigations parallel to those in the cotton industry; in the boot and shoe industry, a study of the effects of moderately heavy work carried on under special and varying conditions as regards hours and spells of work and factory hygiene; in heavy laundry work by women, a study of the effects upon women of work involving heavy muscular labor, continuous standing and long exposure to heat and humidity, to be supplemented by an inquiry into the effects of industrial fatigue upon maternity and other functions; in a large confectionery factory in London, trial experiments upon the effects of changes in posture, economy of movement, and other factors, with the object of finding the optimum conditions of effective work; and a continuation of statistical tabulations of the large body of factory records collected during the war by the Ministry of Munitions.

— *Privy Council. Committee for scientific and industrial research. Report for the year 1918-19. London, 1919. 94 pp. Cmd. 320. Price, 6d. net.*

— *Registrar of Friendly Societies. Reports for the year ending 31st December, 1918. Friendly societies, industrial and provident societies, building societies; trade-unions, workmen's compensation schemes, loan societies, scientific and literary societies, post office, trustee and railway savings banks. Part A.—Appendix (A.) Particulars of valuation returns. London, 1919. 37 pp. 189-1. Price, 4d. net.*

GREAT BRITAIN.—*Treasury. Committee on housing finance. Housing finance. Interim report. London, 1919. 7 pp. Cmd. 444. Price, 1d. net.*

Appointed to consider measures to be taken to facilitate the raising of capital to carry out housing schemes, the committee now recommends—

1. Mortgage loans of local authorities to be constituted a trustee security in all cases in which the issuing authority has, under existing acts, power to issue stock ranking as a trustee security.

2. The largest authorities to continue their present system of borrowing to provide the money required for housing.

3. Power to be taken to continue the Public Authorities and Bodies (Loans) Act, 1916, which enables local authorities to borrow abroad.

4. (a) Local authorities to have power, subject to the sanction of the departments concerned, to combine for the purpose of issuing "local bonds" on the security of their joint rates and revenues; (b) consideration to be given to the question whether county councils can be empowered to raise money by the issue of "local bonds" or otherwise, and lend to local authorities for the smaller areas in the county for housing purposes.

5. The onus of finding the capital necessary for housing to remain on the local authorities.

6. (a) Local authorities to be empowered to issue, at their face value, 5½ per cent "local bonds" of the denomination of £5, £10, £20, £50, and £100, and multiples of £100 for periods of five, ten and twenty years, secured on the whole of the rates, revenues, and properties of the issuing authority, including the rents derived from the houses to be erected, supplemented by the statutory contributions of His Majesty's exchequer under the housing acts; (b) bonds to be on continuous issue; (c) terms of issue of bonds to be subject to revision at a later date.

7. Interest on "local bonds" held by small investors to be paid without deduction of income tax at the source.

8. Transfers of "local bonds" to be free of expense.

9. "Local bonds" to be constituted a trustee security.

10. "Local bonds" to be accepted at their face value, with accrued interest, in payment of the purchase price of houses sold by the local authorities.

11. An active campaign to be instituted throughout the country, with the object of securing the widest possible support of investors of all classes.

——— *Committee on old age pensions. Report and appendix to the report, including minutes of evidence. 2 parts. London, 1919. 19, 362 pp. Cmd. 410, 411. Price, 3d., 3s. net.*

——— *Savings banks and friendly societies. Post-office savings banks fund. Savings banks fund. Friendly societies fund. [Report.] London, 1919. 2 pp. 128. Price, 1d. net.*

——— (CITY OF BIRMINGHAM).—*Medical Officer of Health. Report for the year 1918. Birmingham, 1919. 108, 17 pp. Map. Charts.*

Includes reports on the housing question; inspection of meat, fish, and fruit; and factory and workshop inspection.

MEXICO.—*Secretaría de Industria, Comercio y Trabajo. Boletín de Industria, Comercio y Trabajo. Vol. II, Nos. 1-6, January to June, 1919. Mexico, 1919. 120, 155, 159 pp. and numerous statistical charts.*

Parts 5 and 6 treat of the following subjects of interest to labor: Weekly rest-day; Basis of Justice; The peace conference and labor problems; Labor demands and labor legislation in Argentina; Conciliation and arbitration; Mixed permanent industrial councils; Workmen's committees in Great Britain; Labor legislation in Sonora and Puebla; Laborers' dwellings; Labor conditions in Vera Cruz; Strikes in Mexico; Labor inspector's report, City of Puebla; Australian land question; Law concerning strikes in the State of Tabasco; Industrial accidents in mines; Accident law of Tabasco; Savings banks in Chile; Notes on foreign labor, industry, and commerce, etc.

SWEDEN.—*Kommerskollegium. Industri berättelse för år 1917. Stockholm, 1919. 170 pp.*

This census of Swedish manufactures shows that there were 10,791 establishments in the kingdom in 1917 in which were employed 437,755 persons. Of this latter number 36,430 were salaried persons and 401,325 were wage earners. The census includes only establishments employing 10 or more persons.

NUMBER AND PER CENT OF ESTABLISHMENTS AND WAGE EARNERS IN THE MANUFACTURING INDUSTRIES OF SWEDEN IN 1917.

Industry group.	Establishments.		Wage earners.	
	Number.	Per cent.	Number.	Per cent.
Extraction of minerals (including iron and steel industry)	1,859	17.2	142,359	35.5
Stone and clay	953	8.8	37,618	9.4
Woodworking	2,134	19.8	59,983	14.9
Paper, printing, and publishing	778	7.2	41,857	10.4
Food industries	3,316	30.7	37,263	9.3
Textiles and clothing	545	5.1	43,881	10.9
Fur, hides, and rubber	343	3.2	13,959	3.5
Chemical industries	371	3.4	18,472	4.6
Gas, water, and electricity	492	4.6	5,933	1.5
Total	10,791	100.0	401,325	100.0

— *Socialstyrelsen. Yrkesinspektionens verksamhet år 1918. Stockholm, 1919. 197 pp.*

Report of the factory inspection service of Sweden for the year 1918. The scope of the service is indicated in the following table:

NUMBER AND SIZE OF ESTABLISHMENTS SUBJECT TO INSPECTION.

Year.	Number of establishments.	Number employed.	Effective horsepower.
1913	45,688	329,289	863,478
1914	54,770	367,695	885,916
1915	47,135	367,005	972,857
1916	41,462	402,464	1,041,721
1917	38,954	360,175	1,020,542
1918	39,563	381,852	950,586

— *Statistiska Centralbyrån. Statistisk årsbok för Sverige, 1919. Stockholm, 1919. 316 pp.*

Contains general statistics on population, agriculture, industry, labor, and commerce.

Unofficial.

AMERICAN FEDERATION OF LABOR. *History, encyclopedia, reference book. Prepared and published by authority of the 1916 and 1917 conventions. Washington, 1919. 515, v pp.*

A compilation in encyclopedia form of the many questions considered in the 38 sessions of the Federation, affording a ready reference book that is intended to be of assistance not only to officers and members of the Federation, but "to all who seek to know the principles upon which our trade-union is founded and the wonderful successes achieved." To this is added such useful general information as tables of weights and measures, perpetual calendars, statutes of different States, and other similar matter.

- AMERICAN FEDERATION OF LABOR. *California branch. Proceedings of the twentieth annual convention, held at Bakersfield, Calif., October 6-10, 1919. San Francisco, Underwood Bldg., 1919. 135 pp.*
- *Colorado branch. Official proceedings and officers' reports of the twenty-fourth annual convention, Fort Collins, August 11-14, 1919. Denver, 1919. 111 pp.*
- *Georgia branch. Proceedings of the twenty-first annual convention, held in Brunswick, April 16-19 1919. Savannah, 1919. 48 pp.*
- *Idaho branch. Proceedings of the fourth annual convention, Boise, Jan. 13-16, 1919. Boise, P. H. Spangenberg, secretary, 1919. 62 pp.*
- *Indiana branch. Official proceedings of the thirty-fifth annual convention, held at Indianapolis, August 27-30, 1919. 256 pp.*
- *Iowa branch. Constitution and proceedings of the twenty-seventh annual convention, held at Sioux City, May 20-24, 1919. Sioux City, 1919. 89 pp.*
- *Kansas branch. Report of proceedings of the thirteenth annual convention, held in Arkansas City, May 12-14, 1919. Leavenworth, Charles Hamlin, secretary, 1919. 93 pp.*
- *Louisiana branch. Proceedings of the seventh annual convention, held at Lake Charles, April 7-9, 1919. Shreveport, E. H. Zimally, secretary, 1919. 67 pp.*
- *Maine branch. Minutes of the proceedings of the sixteenth annual convention, held at Calais, June 3-5, 1919. Augusta, 1919. 93 pp.*
- *Massachusetts branch. Proceedings of the thirty-fourth annual convention, held at Greenfield, Sept. 8-10, 1919. Boston, 1919. 147 pp.*
- *Minnesota branch. Proceedings of the thirty-seventh annual convention, held at New Ulm, July 21-28, 1919. St. Paul, 1919. 92 pp.*
- *Montana branch. Official proceedings of the convention, Helena, February 3-6, 1919. Butte, O. M. Partlow, secretary, 1919. 152 pp. Chart.*
- *Nebraska branch. Proceedings, 1919 convention, Omaha, August 5-8. In The Federationist, October, 1919, Lincoln.*
- *New York branch. Official proceedings of the fifty-sixth annual convention. Syracuse, August 26-28, 1919. Utica, Edward A. Bates, secretary, 1919. 278 pp.*
- *North Carolina branch. Proceedings of the thirteenth annual convention, held at Raleigh, August 11, 12, 13, 1919. Asheville, 1919. 76 pp.*
- *North Dakota branch. Report of the eighth annual convention, Minot, June 1, 1919. [Fargo, Conrad Meyer, secretary, 1919.] 32 pp.*
- *Ohio branch. Proceedings of the thirty-sixth annual convention, held in Zanesville, October 13-17, 1919. Cincinnati, Thos. J. Donnelly, secretary, 1919. 143 pp.*
- *Oklahoma branch. Official proceedings of the sixteenth annual convention, held at Sapulpa, September 15-18, 1919. Oklahoma City, 1919. 95 pp.*
- *Pennsylvania branch. Yearbook and proceedings of the eighteenth annual convention, held at Harrisburg, May 13-16, 1919. Harrisburg, 1919. 216 pp.*
- *Tennessee branch. Book of laws and proceedings of the twenty-third annual convention, held at Chattanooga, October 6-8, 1919. 73 pp.*
- *Texas branch. Proceedings of the twenty-second annual convention, including the constitution and laws, held at Beaumont, May 19-24, 1919. Temple, Robert McKinley, secretary, 1919. 142 pp.*
- *Washington branch. Proceedings of the eighteenth annual convention, held at Bellingham, June 16-21, 1919. Tacoma, 1919. 152, 16 pp.*
- *West Virginia branch. Proceedings of the twelfth annual convention, held in Clarksburg, May 12-17, 1919. Charleston, 1919. 111 pp.*
- ARMSTRONG ASSOCIATION OF PHILADELPHIA. *Eleventh annual report for the fiscal year ending April 17, 1919. Philadelphia, 1919. 16 pp.*
- BARTON, GEORGE EDWARD. *Teaching the sick. A manual of occupational therapy and reeducation. Philadelphia, W. B. Saunders Co., 1919. 163 pp.*

BOARD OF ARBITRATION FOR THE AGREEMENTS BETWEEN THE AMALGAMATED CLOTHING WORKERS OF AMERICA AND CHICAGO CLOTHING MANUFACTURERS. *Decision of December 22, 1919.* [Chicago, 1919.] 14 pp.

The board, in this decision, granted an increase beginning December 15, 1919, and continuing to June 1, 1920, in the piece and wage rates. These increases are to be applied as follows:

An increase of 20 per cent shall be given to sections or occupations where the average earnings or wages on a 44-hour basis are \$30 or less per week, and 5 per cent to sections where the average earnings on a 44-hour basis are \$50 or more per week. An increase equivalent to \$6 per week shall be given to sections where the average earnings are from \$30 to \$49.99 per week.

An increase of 20 per cent shall be given to all week workers now receiving less than \$30 per week; an increase of \$6 per week to week workers now receiving from \$30 to \$49.99 per week; and an increase of 5 per cent to week workers now receiving \$50 or more per week.

In piecework sections, the equivalent of the increase shall be calculated and added to the existing piece rates.

It is provided that the increase shall apply to all sections and classes of labor represented by the Amalgamated Clothing Workers of America, except that inexperienced persons employed in the trade less than three months at week work are not included.

BRAINARD, ANNIE M. *Organization of public health nursing.* New York, The Macmillan Co., 1919. 144 pp.

This is the first of a series of books dealing with subjects essential to the development of public health nursing, and is indorsed by the National Organization for Public Health Nursing. A preface by Mary Sewell Gardner states that "Three elements are essential to the successful administration of public health nursing: First, the authority of Federal, State, or municipal health control; second, an informed public; third, professional workers—i. e., public health officers and public health nurses. The National Organization for Public Health Nursing includes in its membership and management these essential types." The book describes various forms of organization and sets forth principles which have been tested and found satisfactory.

BUNGE, AUGUSTO. *La inferioridad económica de los Argentinos nativos. Sus causas y remedio.* Buenos Aires, 1919. 95 pp.

This report gives the result of an investigation of the influence of unrestricted immigration in Argentina, based largely, if not entirely, on data shown in the census of the Republic of 1914. It is stated that as a result of systematic encouragement of immigration multitudes of uneducated and unskilled wage earners have come into the country, causing wages to be lowered through exaggerated competition in a limited labor market. Stress is placed upon the necessity of improving the system of general education, so that vocational training shall be fostered and developed by directing the trend of popular education toward a preparation for industrial or commercial needs, rural occupations, or domestic arts. Continuation schools and the development of individual adaptation of the pupil for a vocation are also recommended.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING. *Eleventh annual report of the president and of the treasurer.* New York City, October, 1916. 172 pp.

— *Twelfth annual report of the president and of the treasurer.* New York City, 1917. 154 pp.

— *Pensions for public school teachers, by Clyde Furst and I. L. Kandel.* New York City, 1918. 85 pp. Bulletin No. 12.

A report for the committee on salaries, pensions, and tenure of the National Education Association.

CLARK, NEIL M. *Common sense in labor management*. New York, Harper & Bros., 1919. 218 pp. *Bibliography*.

This book is not a discussion of the theories underlying the establishment of satisfactory relations between employers and employees, but is, on the contrary, confined largely to discussion of the practical results achieved by different companies through the various policies adopted by them toward this end. Many instances are given of successful adjustment of employee relations by means of good living and working conditions, different plans for adjusting wages, payments of bonuses, profit-sharing, and establishment of shop committees or cooperative systems. The International Harvester Co.'s industrial council plan and the wage policy of the Oneida Community (Ltd.) are appended.

DENNING, ARTHUR DU PRÉ. *Scientific factory management*. London, Nisbet & Co. (Ltd.), 1919. xii, 211 pp. *Chart*.

The faults of business organization of the past and the necessity for reorganization of industry along progressive lines are discussed by the author, who especially commends American methods and principles as voiced by the leading exponents of scientific management. In summarizing the functions of managers, foremen, and workers the statements are made that managers in the future must approach their problems in a more scientific spirit, the duties of foremen must be more carefully and logically regulated, and the workers must realize the necessity for elimination of waste effort and for increased production. The qualifications of the factory manager of the future are defined and the necessity for a definite plan of organization is shown. The appendixes include a bibliography, a statement of the most vital requirement of British industry, classification and purpose of standards, and a scientific organization chart.

DÉSPLANQUE, JEAN. *Le problème de la réduction de la durée du travail devant le Parlement Français*. Paris, 1918. viii, 558 pp. *Bibliography*.

DOOLEY, WILLIAM H. *Principles and methods of industrial education for use in teacher training classes*. Boston, Houghton Mifflin Co., 1919. 257 pp.

DUNCAN, C. S. *Commercial research. An outline of working principles*. New York, The Macmillan Co., 1919. 385 pp.

The book is devoted to the development of the author's theory that "1. The immediate and primary need of business to-day is intelligent direction and control, individually, generally; 2. Intelligent direction and control of business can be had only by a better knowledge of business principles; 3. A better knowledge of business principles can be derived only from a careful and comprehensive survey of business facts; 4. To secure a careful and comprehensive survey of business facts is a problem for business research; 5. Therefore, the immediate need of business to-day can be met only by business research."

EMPLOYERS' FEDERATION OF NEW SOUTH WALES. *Report of annual meeting, 13th November, 1919: Sydney, 1919. 35 pp.*

This report includes the annual address of the president, who discussed: Industrial problems; The International Labor Convention; and Industrial relationships. A review of the living wage inquiry of 1919 of the New South Wales Board of Trade and a summary of the conclusions of the Employers' conference on industrial relationships, held in Melbourne in 1919, called by the Central Council of Employers' Federations, are appended.

EMPLOYMENT MANAGEMENT AND SAFETY ENGINEERING. Chicago, American School of Correspondence, 1919. 7 vols. *Illustrated*.

A reading course in modern employment management and safety measures based upon a personal survey of 60 representative plants installations. The

titles of the volumes are as follows: Vol. I. Employment department organization, functions, personnel. 238 pp. Vol. II. Job analysis, labor sources, safeguarding selection, by Fred A. Krafft and Walter Stearns. 254 pp. Vol. III. Training workers, systems, policies, forms, by Fred A. Krafft. 296 pp. Vol. IV. Follow-up, labor turnover, collective bargaining. 371 pp. Vol. V. Industrial insurance, medical service, legal phases. 280 pp. Vol. VI. Safety work, accidents, engineering features, equipment, by David S. Beyer. 182 pp. Vol. VII. Mechanical guarding, special features, by David S. Beyer. 189 pp.

The course has evidently been hastily prepared, is brought together in an unsystematic and quite illogical manner, and in many of the chapters gives evidence of little or no editorial supervision. There is much repetition.

FURUSETH, ANDREW. *Second message to seamen. His relationship to the harbor workers and the shipowners. Chicago, International Seamen's Union of America, 1919. 29 pp.*

Discusses the personnel of the merchant marine and its varied requirements, the crimping system, the seamen's struggle to organize, and future duties and possibilities.

GOMPERS, SAMUEL. *Labor and the common welfare. Compiled and edited by Hayes Robbins. New York, E. P. Dutton & Co., 1919. 306 pp. Labor movements and labor problems in America.*

This volume, composed of selections from the writings and addresses of Mr. Gompers during the last 35 years, discusses certain broad general phases of the labor problem in its relation to the life of the community as a whole.

HAMILTON, WALTON HALE, EDITOR. *Current economic problems: A series of readings in the control of industrial development. Revised edition. Chicago, University of Chicago Press, 1919. 946 pp.*

A collection of expressions on various economic matters, gathered from many authors and various sources old and new, and adapted and arranged into a coherent study. The conception of economics is much the same as that which runs through the first edition of the work, but the materials now included are of more immediate value as illustrative of the problems of to-day. The theory upon which the book has been constructed is "That our society is a developing one; that the institutions which make up its structure are interdependent; that industry occupies a place of prime importance in determining its nature; that current problems rest upon the triple fact of an immutable human nature, a scheme of social arrangements based upon individualism, and a world-wide industry organized about the machine technique; that current problems represent a lack of harmony between the elements; and that conscious attention to these interrelated problems is the means through which industrial development is to be controlled." The book aims to give only a perspective of economic problems, which precedes specialized study, and to present "an outside view of questions of the day and to indicate their places in the larger universe which contains them."

HASSE, ADELAIDE R. *Index of economic material in documents of the States of the United States. Pennsylvania 1790-1904. Prepared for the Department of Economics and Sociology of the Carnegie Institution of Washington. Part I-A to E. Washington, Carnegie Institution, 1919. 810 pp.*

INTERNATIONAL INSTITUTE OF AGRICULTURE. *Bureau of Economic and Social Intelligence. International Review of Agricultural Economics (Monthly Bulletin of Economic and Social Intelligence). Year X: No. 6-7. Rome, June-July, 1919. Pp. 321-436.*

Part I is devoted to cooperation and association and contains articles on cooperation for the sale of produce in California and agricultural cooperation in Norway, besides miscellaneous information relating to cooperation and associa-

tion in various countries. Regarding agricultural cooperation in Norway, the number of cooperative societies, which in 1912-13 was 2,526, was in 1917 3,304, with a membership of 207,769, showing that about one-twelfth of the population is interested in the cooperative movement in one form or another. These societies fall into four main groups: Cooperative producing and selling societies, farmers' federations for purchase in common, farmers' cooperative selling societies, and cooperative consumers' societies. Among the latter the Union of the Cooperative Societies of Norway is included.

The article on national insurance against labor accidents in Italy shows that in 1918 the national institute issued, through the medium of its district officers, secondary offices and agencies, 33,780 new policies insuring 698,998 workmen, as against 679,736 in 1917, received 100,720 declarations of accidents, and paid 15,319,450 lire (par value of lira=19.3 cents) in benefits for 103,118 cases of accidents of which 410 were fatal and 7,422 produced permanent disablement.

JOURNAL OF INDUSTRIAL HYGIENE. Vol. 1, No. 8. New York, The Macmillan Co., December, 1919. Pp. 371-418, 119-142.

This issue is devoted to the publication of papers delivered before the health section of the National Safety Council at the Eighth Annual Safety Congress, held at Cleveland, Ohio, October 1-4, 1919. The paper by Dr. David L. Edsall on "Industrial clinics in general hospitals," was noted in the January, 1920, issue of the MONTHLY LABOR REVIEW.

Other papers in this number are on Health education in industry, by Dr. W. A. Evans; Industrial dermatoses, their sources, types, and control, by Dr. William Allen Pusey; Malingering—involving the problem of getting the sick or injured employee back to work, by Dr. Judson C. Fisher; The treatment of burns, by Dr. W. Irving Clark; and The coordination of industrial and community health activities, by Dr. C. E. Ford. The last article is reviewed on pages 201 and 202 of this issue of the MONTHLY LABOR REVIEW.

LESCOHIER, DON D. *The labor market.* New York, The Macmillan Co., 1919. xii, 338 pp.

The following note from the preface indicates the purpose of this volume: "It aims to prove the necessity for national machinery for the control of the problem of employment and to furnish information which the author hopes will be of value to employment office managers and to students of the employment and the labor problem."

LIBRARY EMPLOYEES' UNION OF GREATER NEW YORK. *Industrial democracy, 1848-1919. A study help.* [New York City, September, 1919.] 34 pp. Pamphlet No. 1.

LOPEZ, C. D. *Sociedades y Sindicatos. Contribucion a la legislacion obrera. Cuestiones sociales. Tomo 1.* Mexico City, 1918. 586 pp.

MILNES, ALFRED. *The economic foundations of reconstruction.* London, Macdonald & Evans, 1919. 226 pp.

A collection of lectures delivered before the political and economic circle of the National Liberal Club, London. The majority of the lectures were given before the cessation of hostilities, but the author says that the change in the world position has called for no alteration in the exposition of the economic principles stated. Chapters are on Payment by production; Enrichment by exchange—international trade; Foreign exchanges; The general question of free trade; Recent attacks on free trade; Economics of a league of nations—finance after the war and industry after the war—our liberties. The last two chapters concern "the vast and complicated subject of the relations be-

tween labor, capital, and the Government, in the immediate future, and in the developments of more permanent industrial organization," and devote considerable attention to the tariff, scientific management, and the work of the Whitley councils. In concluding, the author says, "We shall have to get back to our peace standard of production and spread our goods again over the whole world before we can even begin to pay our enormous debt. Far beyond that standard we must go before the payment can be completed. And there is no payment save in goods; and quantity of goods depends on our efficiency. And I claim the right to use strength of hand and dexterity of brain to the best account. My efficiency is the most precious portion of my freeman's inheritance. I submit that the product of that efficiency is my own; I have a right to exchange it with whomsoever I please. For human progress rests on exchange; to limit exchange is to limit civilization, and pro tanto to enslave mankind. For it dooms mankind to greater exertion for smaller satisfaction. It is a resultless corvée; stupid as well as wicked; a usurpation beyond the authority of any Government. Civilization has denied the right of ownership in human beings, and has declared the slave owner's title bad."

MOLEY, RAYMOND, AND COOK, HULDAH FLORENCE. *Lessons in democracy. For use in adult immigrant classes.* New York. The Macmillan Co., 1919. 197 pp.

This book aims to instruct aliens in America in the essential facts connected with citizenship and is especially planned for those of limited education and knowledge of the language. It is intended primarily for school use but can also be used by foreigners who are not in formal classes and by candidates for nationalization.

NATIONAL CHILD LABOR COMMITTEE. *Child welfare in Kentucky. An inquiry by the National Child Labor Committee for the Kentucky Child Labor Association and the State Board of Health, under the direction of Edward N. Clopper.* New York, 105 East Twenty-second Street, 1919. 322 pp. Map.

The National Child Labor Committee was invited in the spring of 1919 by the Kentucky Child Labor Association, the Louisville Welfare League, the State board of health, the Kentucky Federation of Women's Clubs, and other agencies to study conditions affecting children in Kentucky and to prepare a report of the findings. Accordingly eight agents of the committee's staff spent several months visiting typical counties in the regions known as the Mountains, Blue Grass, Beargrass, Pennyriple, and Purchase, as well as in the western mining district, along the Ohio River, and in the isolated region in the south-central division. This report covers Health, Schools, Recreation, Rural life, Child labor, and Juvenile courts. The report on Child labor, by Mrs. Loraine B. Bush concludes with a recommendation for the adoption as soon as practicable of the minimum standards for the protection and education of children recommended by the United States Children's Bureau and for the reorganization of the present bureau of agriculture, labor, and statistics and the creation of a State department of labor which will include among its activities the inspection of mines as well as the enforcement of labor laws.

NATIONAL COMMITTEE ON PRISONS AND PRISON LABOR. *The delinquent girl and woman. Proceedings of a conference, February 3, 1919.* New York, Broadway and 116th Street, 1919. 31 pp. Prison leaflets No. 58.

Includes a paper on Industrial training for women prisoners, by Mrs. Jessie D. Hodder, superintendent of the Massachusetts Reformatory for Women, based on the work of the reformatory.

NEDERLANDSCH VERBOND van Vakvereenigingen. *Verslag van de negende algemeene vergadering * * * en van de buitengewone algemeene vergadering.* [Amsterdam, 1919.] 110 pp.

Comprises the reports of the ninth regular meeting, July 18-20, 1918, and the special meeting of April 1, 1919, of the Dutch Federation of Trade-Unions.

RAWLEY, RATAN C. *Economics of the silk industry: A study in industrial organization.* London, P. S. King & Son (Ltd.). 1919. 349 pp.

The object of this book is to present the economic side of the silk industry in a connected form; that is, from the production of the cocoons to the finished fabric. The growing importance of the silk industry not only because of the demand for the product as an article of dress but for use in manufacture of surgical and electrical appliances and in many branches of warfare, with the consequent presence of international competition, makes such a study of importance. The development of silk production in the Far East is traced and the economic factors connected with the production of the raw silk and the silk manufacturing industries are discussed. Special attention is paid to the effects of foreign competition on the British silk industry for the purpose of determining the economic factors which influence success, and to the commercial organization of the raw-silk trade and the system of marketing and distribution.

ROBERTSON, JOHN. *Housing and the public health.* London, Cassell & Co. Ltd., 1919. xi, 159 pp.

In spite of the fact that only the most imperfect methods exist whereby to measure the harm done to health by bad housing, there is, in the opinion of the author, a mass of evidence already accumulated of the evil results of living under unwholesome conditions. Bad housing forms only one of a circle of vicious influences in the life of the economically depressed. Poverty, vice, drink and ignorance are all factors. But as bad housing is a factor which lends itself to concrete attack, and because its elimination would probably yield the most permanent and beneficial results, it is the most important problem for the social reformer.

Bad housing is one of the outgrowths of rapid industrial development. The author looks upon it as perhaps an inevitable result because it has arisen as a consequence of a lack of foresight and judgment. These are human failings against which it is somewhat useless to complain.

It is the purpose of the volume under review to suggest those changes in house construction, space allotment, surroundings, general layout of block and city material of construction, floor plan, and room arrangements and household conveniences, which will improve present methods of house construction. Reliance is had almost wholly upon secondary measures. The underlying land problem is wholly untouched. The local authorities and parliamentary legislation exemplified in the present housing acts of Great Britain are looked to in the solution of the problem. Manufacturers are urged to utilize the opportunities afforded by this legislation. If the improved houses are provided experience indicates that the people will respond and appreciate the improvements.

RUSSELL SAGE FOUNDATION LIBRARY. *Industrial pensions: a selected bibliography.* New York, December, 1919. 4 pp. Bulletin No. 38.

SIMPSON, KEMPER. *Price fixing and the theory of profit.* In *Quarterly Journal of Economics*. November, 1919. Cambridge, Harvard University Press. 1919. pp. 138-160.

This article discusses methods of price fixing, the theory of profit, and the relation of the latter to price fixing.

SOCIETY OF INDUSTRIAL ENGINEERS. *American and international labor conditions. Complete report of the proceedings of the fall national conference, Cleveland, Oct. 29-31, 1919. Chicago, 1919. 161 pp.*

SONNICHSEN, ALBERT. *Consumers' cooperation. New York, The Macmillan Co., 1919. xiv, 223 pp.*

A review of this book appears on pages 134 to 137 of this issue of the REVIEW.

STUDENSKY, PAUL. *The pension problem and the philosophy of contributions. New York, Bureau of Municipal Research, 1917. 20 pp.*

This pamphlet discusses the objects sought in the establishment of pension funds and the lack of actuarial soundness in most of the systems in force. The plans are divided into three classes: The wholly contributory, the noncontributory, and the partly contributory systems. The author reaches the conclusion that the partly contributory system is the one best calculated to secure success largely by reason of the fact that it does not tend to increase or decrease wages or to become "deferred pay" as is the case in one or the other of the two other systems. It also permits the establishment of a system which is financially sound, since by dividing the cost sufficient funds are created without unduly burdening either the employees or the employer, municipality, or Government.

TALBOT, FREDERICK A. *Millions from waste. Philadelphia, J. B. Lippincott Co., 1920. 308 pp.*

The purpose of this book is to "indicate certain of the most obvious channels through which wealth incalculable is being permitted to escape, as well as the narration of something concerning the highly ingenious efforts which are being made to prevent such wastage." It is intended primarily for the uninitiated reader and aims to acquaint the man in the street and the woman at home with the enormous wastage, both in finance and kind, which is incurred in the most familiar fields during the course of the year, and to persuade them to observe methods of thrift.

TODD, ARTHUR JAMES. *The scientific spirit and social work. New York, The Macmillan Co., 1919. 212 pp.*

Although the main part of this book deals with the detailed administrative methods of social workers and the problems involved in them, several chapters are devoted to restating the philosophical and psychological principles upon which the author believes sound social work is based and by which it is justified, and a little space is given to cautions to social reformers. A chapter on "Recent tendencies in social reform" gives a clear setting for the problems which at present confront the social worker and which are discussed in chapters dealing with Sentimentality and social reform, The dead center in social work, The labor turnover in social agencies, The adventurous attitude in social work, and Social progress and social work.

TRADES AND LABOR CONGRESS OF CANADA. *Report of the proceedings of the thirty-fifth annual convention held at the city of Hamilton, Ontario, September 22 to 27, 1919. Ottawa, P. M. Draper, secretary-treasurer, 1919, 234 pp.*

An account of this convention was given in the December, 1919, issue of the MONTHLY LABOR REVIEW, pages 365 to 368. *

TRADES-UNION CONGRESS. *Report of proceedings at the fifty-first annual trades-union congress held in Glasgow, September 8 to 13, 1919. London, 1919. 408 pp.*

A digest of this report is given on pages 256 to 258 of this issue of the MONTHLY LABOR REVIEW.

UNIVERSITY DEBATEES' ANNUAL. *Constructive and rebuttal speeches delivered in debates of American colleges and universities during the college year, 1918-19. Edited by Edith M. Phelps. New York, H. W. Wilson Co., 1919. 234 pp. Bibliographies.*

Two chapters are devoted to the subject of Government ownership of railroads and one treats of Federal employment for surplus labor.

WHITFORD, JAMES F. *Factory management wastes; and how to prevent them. London, Nisbet & Co. (Ltd.), 1919. x, 220 pp. 8 charts.*

This book deals with the problem of waste found in the average factory in relation to the bearing which it has on the solution of present-day labor problems. The author believes that when employers and employees realize that their interests are identical and that the elimination of preventable losses serves the interests of both "the successful solution of a difficult and complex problem is capable of attainment." The author denies that modern factory methods or scientific management are "dehumanizing" but argues that carried out to the greatest possible perfection they bring the workers not only greater material returns but increased leisure and opportunities for enjoyment. The subjects of overtime, cost finding, and wage systems, including profit sharing, are also discussed.

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Prevention of Accidents by the Statistical Method.¹

By ROYAL MEEKER, UNITED STATES COMMISSIONER OF LABOR STATISTICS

STATISTICS are commonly thought of as exceedingly dry and rather useless arrays of figures. No popular misconception is more at variance with the truth than this misconception of the nature and purpose of statistics. In the field of accident prevention safety men were unable to make much impression on the frequency of accident occurrence until accident statistics showed the causes responsible for the greater numbers of accidents.

The crude statistics of accident occurrence, which counted all accidents as equally important, whether resulting in death, the loss of an arm, or a cut on the finger, were useful in assisting the safety men to determine the causes and reduce the number of accidents. These crude statistics of accident occurrence or accident frequency were wholly inadequate for attacking the causes of the fatal and more severe accidents. The analyses by the U. S. Bureau of Labor Statistics of accidents by length of disability or severity of injury had some very important results. It was found that some industries and occupations with high accident frequency rates had low severity rates. On the other hand, industries and occupations with low frequency rates had high severity rates. It was further discovered that the fatal and more severe accidents were largely due to faulty layout of plants and faulty construction of equipment. For instance, blast furnaces formerly contributed very largely to the fatal accidents in the manufacture of iron and steel. The heavy toll of deaths due to blast-furnace accidents led to improvements in construction by which "blow-outs" with their accompanying fatalities have been almost entirely eliminated. The substitution of mechanical charging of blast furnaces for the old hand-charging method has practically eliminated fatal "gassing" among the men who were obliged to work on top of the old type of blast furnaces. These improvements in the construction of blast furnaces were brought about as the result of the analyses of accident statistics and the calling of the attention of those responsible for the direction of industry to the causes of the more severe accidents.

¹ This article was published in the National Safety News, bulletin of the National Safety Council, Chicago, Jan. 26, 1920.

It is impossible to differentiate accurately responsibility for accident occurrence. There must be the fullest cooperation between management and men if accidents are to be reduced to the irreducible minimum. Workers must be educated to be careful in doing their work. The management must be educated to be careful in laying out and building the plant and equipment to be used by the workers. The analyses of accident statistics made by the U. S. Bureau of Labor Statistics indicate that the education of the workmen may and does result in reducing very greatly the number of accidents, especially the minor ones. These studies indicate with equal precision that we must depend upon the education of employers to bring about any marked decrease in the severity of accidents. Workers can spend all their time being careful in a badly constructed or badly equipped plant and yet be killed or seriously injured by reason of unsafe railroad yards or badly designed or badly built machines and other equipment.

Need for Accurate Accident Statistics.

THE safety movement has gained tremendous impetus. The workers are being educated in the gospel of being careful not merely for their own safety but for the safety of their fellow workers. Employers are also being educated to provide safe and sane workshops and equipment for their workers to use. The great need of the hour is more accurate accident statistics and more intelligent tabulation and analysis of such statistics. Employers have gone about as far as they can go in directing the safety campaign until they can be given more information about the causes and severity of accidents in industries and occupations that have not yet been included in detailed accident studies.

The most important contribution that could be made to the further development of the safety movement would be the adoption in all the States of the Union of uniform accident reporting blanks. These blanks should call for the essential facts which safety men and factory inspectors must know to determine the causes and results of accidents. These uniform accident reports should be tabulated on the tabular forms adopted and according to the rules laid down by the Committee on Statistics and Compensation Insurance Cost of the International Association of Industrial Accident Boards and Commissions. Information regarding accident occurrence and results collected in a uniform way from all industries and plants throughout the country and tabulated in a uniform manner would be most valuable to employers, employees, and factory inspection departments. The safety movement could then be intelligently directed toward the reduction or elimination of the more severe accidents in the industries and occupations with the higher severity rates.

The campaign for the reduction of severe accidents need not at all diminish the vigor of the campaign for the reduction of minor injuries. It is important to reduce the occurrence of all accidents—minor and major—to the irreducible minimum, but the point that needs emphasis just now is the fact that it is more important to prevent the loss of the legs, the arms, and the lives of workers than to prevent the loss of the finger nails and cuticle of workers.

The men who are engaged in analyzing accident statistics by tabulating them by causes and severity of injuries are like the general staff of the army. They map out the objectives of the campaign and furnish the information necessary to attain these objectives most speedily and economically. The Safety Movement Army has now caught up with the general staff. It has attained all of the objectives that have been clearly mapped out by the statistical strategists. The imperative need of the Safety Movement Army now is for better and more detailed maps of the enemy's country and the clear indication of the objectives for the next onward movement. These maps can only be supplied by the accident statisticians when they obtain more complete and accurate accident statistics. Let the watchword be the prevention of every preventable accident. To attain this goal, accurate, complete, and comprehensible accident statistics are indispensable. Better statistics make for better safety work.

Duration of Wage Earners' Disabilities.

By BORIS EMMET, Ph. D.

A BRIEF report on the extent of disabilities among wage earners was published in the November, 1919, issue of the REVIEW.¹ The article presented herewith represents a supplementary study undertaken for the purpose of revealing the duration of disability as influenced by age and occupation. The figures are for the years 1912 to 1916, inclusive, and represent the experience of the Workmen's Sick and Death Benefit Fund of the United States of America. Disabilities resulting from accident as well as those caused by sickness are included. Members of Class III, who are entitled to receive death benefits only, are not included.

The following table shows the duration of disabilities among wage earners by presenting the proportion of cases of each specified duration and the number and per cent of disability days in each duration period.

TABLE 1.—NUMBER AND PER CENT OF CASES AND OF DAYS OF DISABILITY IN EACH SPECIFIED DURATION PERIOD.

Duration of disability.	Cases of disability.		Days of disability.	
	Number.	Per cent.	Number.	Per cent.
1 day.....	270	0.6	267	(¹)
2 days.....	1,013	2.3	1,996	0.2
3 days.....	1,586	3.7	4,707	.4
4 days.....	1,844	4.2	7,302	.6
5 days.....	2,088	4.8	10,344	.9
6 days.....	1,502	3.5	8,910	.7
Total, under 1 week...	8,303	19.1	33,526	2.8
1 week and under 2 weeks...	12,071	27.8	109,972	9.0
2 and under 4 weeks.....	10,468	24.1	195,981	16.1
4 and under 12 weeks.....	9,418	21.6	423,490	34.8
12 and under 25 weeks.....	2,269	5.2	244,316	20.1
25 weeks and over.....	956	2.2	208,841	17.2
Grand total.....	43,485	100.0	1,216,116	100.0

¹ Less than one-tenth of 1 per cent.

² This total differs somewhat from the total days of disability (1,223,324) shown in the article entitled "Disability among wage earners," which appeared in the November, 1919, issue of the MONTHLY LABOR REVIEW, Table 5, p. 26. The difference is due to the method of computation. The larger figure of the earlier report represents the actual number of disability days. The smaller figure given here was arrived at by multiplying the number in each group by the mean of the lower and higher number of days included in the group.

Table 1 shows that slightly over 19 per cent of all the cases and about 3 per cent of the total days of disability were due to disabilities of less than one week. More than 46 per cent of the cases and

¹ "Disability among wage earners," MONTHLY LABOR REVIEW, November, 1919, pp. 20-39.

about 12 per cent of the total days of disability were caused by disabilities extending less than two weeks.

The information given in Table 1 is of interest to students of State and fraternal social insurance as well as to organizations having, or proposing to have, employees' sick benefit societies. One of the two most pressing questions in all such instances is that of the waiting period. A very short waiting period, or no waiting period at all, has a definite tendency to encourage malingering. Again, too prolonged a waiting period may mean that a considerable number of disabled persons, actually in need, will be deprived of the sorely needed financial assistance. Certain of the proposed State social insurance plans provide for a waiting period of three days. The disability experience presented in Table 1 shows that a waiting period of three days would eliminate from benefit payment less than 7 per cent of the disability cases. Such an elimination would be most desirable from the point of view of guarding against malingering and would, at the same time, cause very little hardship because the proportion of disability days covered by cases of a duration of three days or less is insignificantly small, slightly over one-half of 1 per cent of all disability days.

The length of the benefit period is the second important consideration in sickness insurance. Long benefit periods mean, of course, a great financial burden. The usual length of benefit periods in many of the existing voluntary sickness insurance societies as well as in trade-union funds is about three months.¹ Table 1 shows that 7.4 per cent of all the disability cases last 12 weeks and over. These cases represent 37.3 per cent of all the disability days.

The Age Factor in Disability Durations.

TABLE 2 shows for all occupations the number and per cent of members disabled each classified number of days, by age groups.

The detailed facts presented in Table 2 are, for purposes of clearer analysis, summarized in Table 3, in 5-year age groups, and in Table 4, in 10-year age groups.

¹ See article on "Operation of establishment and trade-union disability funds," in MONTHLY REVIEW of the United States Bureau of Labor Statistics, August, 1917, pp. 22-36.

TABLE 2.—NUMBER AND PER CENT (ALL OCCUPATIONS) DISABLED EACH SPECIFIED PERIOD, BY 5-YEAR AGE GROUPS.

Number disabled.

Age group.	1 day.	2 days.	3 days.	4 days.	5 days.	6 days.	7 days.	8 days.	9 days.	10 days.	11 days.	12 days.	13 days.	14 days.	15 days.	16 days.	17 days.	18 days.	19 days.	20 days.	21 days.	22 days.	23 days.	24 days.	25 days.
Under 20.....	1	6	9	10	14	54	11	8	6	3	5	6	.....	8	4	2	1	2	.....	.....	4	1	.....	2	.....
20 to 24.....	17	71	110	117	148	54	189	75	82	69	60	57	.....	20	39	27	27	35	12	33	18	12	12	12	20
25 to 29.....	35	136	196	212	254	113	391	162	104	115	121	117	57	158	60	73	69	53	41	32	84	33	41	36	32
30 to 34.....	51	169	281	266	312	197	516	213	200	152	148	157	81	224	85	74	106	82	86	43	121	61	44	50	42
35 to 39.....	45	187	254	325	338	222	618	250	232	225	195	187	142	262	129	145	119	107	101	71	139	55	65	68	60
40 to 44.....	40	185	254	313	358	227	648	252	280	222	206	251	149	314	152	124	122	122	135	89	191	80	86	80	69
45 to 49.....	30	132	215	257	279	269	649	238	229	227	209	208	174	335	138	155	150	149	110	112	194	93	100	63	81
50 to 54.....	26	75	141	186	206	225	503	169	181	184	157	166	173	313	136	111	112	101	102	102	170	71	75	50	39
55 to 59.....	16	48	86	109	135	128	316	135	141	117	90	98	112	218	88	79	63	66	68	58	131	53	51	50	39
60 to 64.....	6	22	31	42	33	46	138	62	41	47	44	61	48	73	21	31	36	27	41	19	57	17	26	16	16
65 to 69.....	3	2	9	6	10	7	35	12	14	10	10	12	13	27	9	8	4	6	8	7	20	7	7	1	8
70 and over.....	.....	.....	.....	1	1	4	2	3	.....	2	2	.....	2	4	.....	1	1	3	2	1	.....	.....	.....	1	.....
Total disabled members.....	270	1,013	1,586	1,844	2,088	1,502	4,016	1,579	1,570	1,370	1,247	1,318	971	2,003	801	840	811	745	729	546	1,144	490	507	473	455
Total disability days.....	267	1,996	4,707	7,302	10,344	8,910	27,961	12,528	14,018	13,570	13,613	15,732	12,550	27,839	12,762	13,328	13,672	13,248	13,667	10,760	23,852	10,604	11,515	11,148	11,081

Per cent disabled.

Under 20.....	0.79	4.72	7.09	7.87	11.02	.....	8.66	6.30	4.72	2.36	3.94	4.72	.....	6.30	3.15	1.57	0.79	1.57	.....	.....	3.15	0.79	.....	1.57	.....
20 to 24.....	.96	3.99	6.19	6.58	8.27	3.04	10.63	4.22	4.61	3.88	3.37	3.21	1.12	3.77	2.19	1.52	1.52	1.52	1.97	0.67	1.86	1.01	0.67	.67	1.12
25 to 29.....	.98	3.81	5.48	5.93	7.11	3.16	10.94	4.53	4.59	3.12	3.39	3.27	1.59	4.42	1.68	2.04	1.83	1.48	1.15	.90	2.35	.92	1.15	1.01	.90
30 to 34.....	1.05	3.48	5.78	5.47	6.42	4.05	10.61	4.38	4.11	3.13	3.04	3.23	1.67	4.61	1.75	1.52	2.18	1.69	1.77	.88	2.49	1.25	.90	1.03	.86
35 to 39.....	.73	2.69	4.10	5.24	5.45	3.58	9.97	4.03	3.74	2.63	3.15	3.02	2.29	4.20	2.08	2.34	1.92	1.73	1.63	1.15	2.25	1.05	1.05	1.10	.97
40 to 44.....	.56	2.60	3.58	4.41	5.04	3.34	9.12	3.55	3.94	3.13	2.90	3.53	2.10	4.42	2.14	1.75	1.72	1.90	2.08	1.54	1.57	1.30	1.40	.88	1.13
45 to 49.....	.43	1.95	3.03	3.59	3.90	3.76	8.32	3.30	3.20	3.17	2.92	2.91	2.43	4.69	1.93	2.31	1.84	1.67	1.69	1.69	2.81	1.17	1.24	1.46	1.13
50 to 54.....	.43	1.24	2.33	3.08	3.41	3.72	8.08	3.33	2.98	3.04	2.60	2.75	2.83	5.18	2.25	1.90	1.81	1.51	1.58	1.63	1.39	1.14	1.27	1.22	1.42
55 to 59.....	.38	1.15	2.06	2.62	3.24	3.38	7.58	3.24	3.38	2.74	2.16	2.30	2.69	5.23	2.11	1.67	1.94	1.51	1.58	1.63	1.39	1.14	1.27	1.22	1.42
60 to 64.....	.32	1.18	1.67	2.26	1.78	2.47	7.42	3.34	2.21	2.53	2.37	3.28	2.98	3.93	1.13	1.67	1.94	1.45	2.21	1.02	3.39	.91	1.40	.86	.86
65 to 69.....	.54	.36	1.62	1.08	1.80	1.26	6.28	2.15	2.51	3.08	1.80	2.15	3.08	4.83	1.62	1.44	1.72	1.08	1.44	1.26	3.59	1.26	1.26	1.26	.86
70 and over.....	.....	.....	.....	1.54	1.54	4.02	3.08	4.02	.....	3.08	3.08	.....	3.08	6.15	.....	1.54	1.54	4.62	3.02	1.54	.....	1.54	.....	1.54	.....
Total disabled members.....	.62	2.33	3.65	4.24	4.80	3.45	9.24	3.63	3.61	3.15	2.87	3.03	2.23	4.61	1.98	1.93	1.86	1.71	1.68	1.26	2.63	1.13	1.17	1.09	1.05
Per cent of all disability days.....	(1)	.2	.4	.6	.9	.7	2.3	1.0	1.2	1.1	1.1	1.3	1.0	2.3	1.0	1.1	1.1	1.1	1.1	.9	2.0	.9	.9	.9	.9

1 Less than one-tenth of 1 per cent.

DURATION OF WAGE EARNERS' DISABILITIES.

7

Number disabled.

Age group.	25 days	4 weeks	5 weeks	6 weeks	7 weeks	8 weeks	9 weeks	10 weeks	11 weeks	12 weeks	13 weeks	14 weeks	15 weeks	16 weeks	17 weeks	18 weeks	19 weeks	20 weeks	25 weeks	30 weeks	35 weeks	40 weeks	45 weeks	Total.
Under 20.	2	9	3	2	2	3																		127
20 to 24.	17	45	63	44	33	24	17	11	13	9	7	5	3	4	3	3	3	1	5	4	2	3	3	1,778
25 to 29.	30	22	163	130	82	72	58	38	23	19	13	12	19	8	6	10	7	4	21	19	12	11	5	3,574
30 to 34.	47	27	243	167	125	90	55	33	29	25	20	17	15	9	8	15	11	8	38	24	12	13	6	4,862
35 to 39.	63	51	348	274	145	141	119	80	51	43	39	34	35	32	28	13	16	17	42	32	26	20	8	6,197
40 to 44.	82	76	425	296	226	151	124	104	88	71	53	43	36	45	28	29	18	15	72	59	30	25	17	7,104
45 to 49.	80	76	448	338	254	195	148	106	83	66	47	50	43	27	23	30	18	74	47	34	27	22	24	7,150
50 to 54.	68	74	400	279	234	176	136	127	99	73	67	49	35	40	29	13	30	90	47	28	23	18	21	6,044
55 to 59.	44	41	267	230	163	135	99	87	64	60	54	36	31	35	40	21	19	21	75	54	27	22	11	4,168
60 to 64.	20	23	127	94	78	54	50	64	35	29	17	19	29	20	15	13	13	13	45	27	23	21	8	1,859
65 to 69.	3	7	45	33	23	28	22	19	13	10	11	12	11	1	6	5	3	6	13	6	2	5	6	557
70 and over.		4	3	4	4	1			1	2	3	1						1	1	1	1	1	1	65
Total disabled members...	456	2,576	1,910	1,380	1,081	835	695	508	433	359	283	283	237	203	161	133	134	476	320	197	167	104	168	43,485
Total disability days....	11,661	10,844	78,438	70,756	60,397	54,418	47,470	43,956	35,085	32,960	29,324	24,722	26,869	24,138	22,028	17,873	15,613	116,873	83,535	58,029	38,252	26,587	52,117	1,216,116

Per cent disabled.

Age group.	25 days	4 weeks	5 weeks	6 weeks	7 weeks	8 weeks	9 weeks	10 weeks	11 weeks	12 weeks	13 weeks	14 weeks	15 weeks	16 weeks	17 weeks	18 weeks	19 weeks	20 weeks	25 weeks	30 weeks	35 weeks	40 weeks	45 weeks	Total.
Under 20.	1.57	0.62	7.09	2.36	1.57	1.57	2.36	0.79	0.73	0.51	0.39	0.28	0.17	0.22	0.17	0.17	0.06	0.28	0.79	0.11	0.11	0.17	0.17	100.00
20 to 24.	.96	5.34	5.34	3.54	2.47	1.86	1.35	0.96	.62	.33	.36	.53	.22	.17	.28	.20	.11	.59	.22	.22	.34	.14	.14	100.00
25 to 29.	.84	4.56	3.64	2.29	2.01	1.62	1.13	1.06	.64	.51	.41	.35	.31	.19	.31	.23	.16	.78	.53	.34	.27	.12	.14	100.00
30 to 34.	.97	5.61	5.04	3.43	2.57	2.08	1.66	1.29	.80	.60	.63	.56	.52	.45	.21	.26	.27	.68	.52	.42	.32	.13	.37	100.00
35 to 39.	1.02	.82	5.62	4.42	2.34	2.28	1.75	1.46	1.24	1.00	.75	.61	.51	.39	.41	.25	.21	.10	.83	.42	.35	.24	.44	100.00
40 to 44.	1.15	1.07	5.98	4.17	3.18	2.13	2.07	1.48	1.16	1.17	.92	.66	.70	.60	.38	.32	.25	1.03	.66	.48	.38	.31	.34	100.00
45 to 49.	1.13	1.06	6.27	4.73	3.55	2.73	2.07	1.48	1.16	1.17	.92	.66	.70	.60	.38	.32	.25	1.03	.66	.48	.38	.31	.34	100.00
50 to 54.	1.13	1.06	6.27	4.73	3.55	2.73	2.07	1.48	1.16	1.17	.92	.66	.70	.60	.38	.32	.25	1.03	.66	.48	.38	.31	.34	100.00
55 to 59.	1.06	.98	6.41	5.52	3.91	3.24	2.38	2.09	1.54	1.44	1.30	.86	.74	.84	.96	.50	.46	1.80	.78	.43	.38	.30	.35	100.00
60 to 64.	1.05	1.24	6.83	5.69	4.20	2.90	2.69	3.44	1.88	1.56	.91	1.02	1.56	1.08	.81	.70	.70	2.42	1.45	1.24	1.13	.43	1.13	100.00
65 to 69.	.54	1.26	8.08	5.92	4.13	3.03	3.95	3.41	2.33	1.80	1.97	1.56	1.97	1.08	.90	.54	1.08	2.33	1.08	1.08	.36	.90	1.08	100.00
70 and over.	...	...	6.15	4.62	6.15	6.15	1.54	...	1.54	3.08	7.69	4.62	1.54	...	...	...	1.54	1.54	...	...	1.54	1.54	1.54	100.00
Total disabled members...	1.05	.94	5.92	4.39	3.17	2.49	1.92	1.60	1.17	1.00	.83	.65	.65	.47	.37	.31	.31	1.09	.74	.45	.38	.24	.39	100.00
Per cent of all disability days....	1.0	.9	6.4	5.8	5.0	4.5	3.9	3.6	2.9	2.7	2.4	2.0	2.2	2.0	1.8	1.5	1.3	5.6	4.4	3.1	3.1	2.2	4.3	100.00

TABLE 3.—NUMBER AND PER CENT (ALL OCCUPATIONS) DISABLED EACH CLASSIFIED NUMBER OF WEEKS, BY 5-YEAR AGE GROUPS.

Age group.	Number disabled.							Per cent disabled.						
	Under 1 week	1 week and under 2 weeks	2 and under 4 weeks	4 and under 12 weeks	12 and under 25 weeks	25 weeks and over	Total.	Under 1 week	1 week and under 2 weeks	2 and under 4 weeks	4 and under 12 weeks	12 and under 25 weeks	25 weeks and over	Total.
25 to 29....	946	1,127	764	585	100	52	3,574	26.5	31.5	21.4	16.4	2.8	1.4	100
30 to 34....	1,276	1,467	1,092	803	158	66	4,802	26.2	30.2	22.5	16.5	3.2	1.4	100
35 to 39....	1,351	1,849	1,435	1,197	256	109	6,197	21.8	29.8	23.2	19.3	4.1	1.8	100
40 to 44....	1,387	2,008	1,723	1,485	339	182	7,104	19.5	28.3	24.2	20.9	4.8	2.3	100
45 to 49....	1,182	1,934	1,846	1,656	378	154	7,150	16.5	27.0	25.8	23.2	5.3	2.2	100
50 to 54....	859	1,333	1,591	1,524	402	135	6,044	14.2	25.4	26.3	25.2	6.7	2.2	100
55 to 59....	522	1,004	1,069	1,105	332	136	4,168	12.5	24.1	25.6	26.5	8.0	3.3	100
Total....	7,523	10,922	9,320	8,355	1,965	814	39,099	19.2	27.9	24.3	21.4	5.1	2.1	100

TABLE 4.—NUMBER AND PER CENT (ALL OCCUPATIONS) DISABLED EACH CLASSIFIED NUMBER OF WEEKS BY 10-YEAR AGE GROUPS.

Age group.	Number disabled.							Per cent disabled.						
	Under 1 week	1 week and under 2 weeks	2 and under 4 weeks	4 and under 12 weeks	12 and under 25 weeks	25 weeks and over	Total.	Under 1 week	1 week and under 2 weeks	2 and under 4 weeks	4 and under 12 weeks	12 and under 25 weeks	25 weeks and over	Total.
Under 20....	40	39	26	20	1	1	127	31.49	30.71	20.47	15.75	0.79	0.79	100
20 to 29....	1,463	1,679	1,121	885	140	64	5,352	27.33	31.37	20.94	16.54	2.62	1.20	100
30 to 39....	2,627	3,316	2,527	2,000	414	175	11,059	23.75	29.99	22.85	18.09	3.74	1.58	100
40 to 49....	2,569	3,942	3,569	3,141	717	316	14,254	18.02	27.66	25.04	22.03	5.03	2.22	100
50 to 59....	1,381	2,537	2,660	2,629	734	271	10,212	13.53	24.84	26.05	25.74	7.19	2.65	100
60 to 69....	217	547	551	724	252	125	2,416	8.98	22.64	22.81	29.97	10.43	5.17	100
70 and over	6	11	14	19	11	4	65	9.23	16.92	21.54	29.23	16.92	6.16	100
Total....	8,303	12,071	10,468	9,418	2,269	956	43,485	19.09	27.76	24.07	21.66	5.22	2.20	100

¹ The totals given in this table include all ages and therefore do not agree with the totals in Table 3.

The influence of the age factor may easily be discerned by a comparison of the figures shown in the columns headed "under 1 week," and "25 weeks and over," of Table 3. In the first instance the proportion of cases lasting under one week was 26.5 per cent in age group 25 to 29, and less than one-half of that—12.5 per cent—in the age group 55 to 59. An entirely opposite, but just as definite, tendency is found in the column showing per cent of disabilities lasting 25 weeks and over. Here the age group 25 to 29 shows 1.4 per cent compared with 3.3 per cent—or more than 100 per cent greater—for the age group 55 to 59. The combination into 10-year age groups, as given in Table 4 shows the same tendency, but in a much more striking manner. Comparing the percentage figures of the columns corresponding to those mentioned in Table 3, it is seen that the proportion of cases lasting under one week is about two-thirds less in age group 60 to 69 than in age group 20 to 29, but that the proportion of cases lasting 25 weeks and over is over three hundred per cent greater in group 60 to 69 than in group 20 to 29.

The Occupational Factor in Disability Durations.

AS STATED in the earlier report on disability among wage earners,¹ the two principal factors determining the extent of disability are age and occupation. A similar statement may be made with reference to the factors determining disability durations.

Although the age factor is most important, the effect of the occupational factor should not be underestimated. Table 5 shows occupational disability durations by giving for all ages the number and per cent disabled each classified number of weeks.

TABLE 5.—NUMBER AND PER CENT (ALL AGES) DISABLED EACH CLASSIFIED NUMBER OF WEEKS, IN EACH OCCUPATION GROUP.

Occupation.	Number disabled.						Total.	Per cent disabled.					
	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.		Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.
Auto, carriage, and wagon manufacturing.....	40	46	43	38	9	4	180	22.2	25.5	23.9	21.1	5.0	2.2
Barbers.....	57	60	36	54	14	7	228	25.0	26.3	15.8	23.7	6.1	3.1
Bartenders.....	66	96	94	101	32	15	404	16.3	23.8	23.3	25.0	7.9	3.7
Blacksmiths.....	81	149	132	119	25	12	518	15.6	28.8	25.5	23.0	4.8	2.3
Bricklayers.....	96	138	144	117	25	19	539	17.8	25.6	26.7	21.7	4.6	3.5
Carpenters.....	477	744	696	671	156	76	2,820	16.9	28.4	24.7	23.8	5.5	2.7
Clay products manufacturing.....	23	41	36	34	8	2	144	16.0	28.5	25.0	23.6	5.6	1.3
Clothing manufacturing.....	173	240	211	193	49	17	883	19.6	27.2	23.9	21.9	5.5	1.9
Cooks and waiters.....	85	134	113	112	25	15	484	17.6	27.7	23.3	23.1	5.2	3.1
Drivers.....	344	497	507	476	111	42	1,977	17.4	25.1	25.6	24.1	5.6	2.1
Dyers.....	29	49	31	41	9	5	164	17.7	29.9	18.9	25.0	5.5	3.0
Electrical workers.....	46	76	41	43	8	1	215	21.4	35.3	19.1	20.0	3.7	.5
Engineers and firemen.....	147	224	182	151	49	13	766	19.2	29.2	23.8	19.7	6.4	1.7
Farmers, gardeners, and florists.....	39	81	62	46	11	4	243	16.0	33.3	25.5	18.9	4.5	1.6
Food employees.....	282	403	400	323	93	36	1,537	18.3	26.2	26.0	21.0	6.1	2.3
Freight handlers.....	21	49	58	50	16	5	199	10.6	24.6	29.1	25.1	8.0	2.5
Glassworkers.....	41	70	49	45	13	4	222	18.5	31.5	22.1	20.3	5.9	1.8
Jewelers.....	44	40	37	35	5	5	166	26.5	24.1	22.3	21.1	3.0	3.0
Laborers, not specified.....	1,017	1,389	1,180	988	215	77	4,866	20.9	28.5	24.2	20.3	4.4	1.6
Leather workers.....	205	245	212	201	45	31	939	21.9	26.1	22.6	21.4	4.8	3.3
Liquor manufacturing.....	718	1,114	1,007	926	192	81	4,038	17.8	27.6	24.9	22.9	.8	2.0
Machinists.....	789	1,007	810	704	188	68	3,566	22.1	28.2	22.7	19.7	5.3	1.9
Miners.....	314	627	592	521	119	47	2,220	14.5	28.2	26.7	23.5	5.4	2.1
Molders.....	151	207	193	155	26	5	737	20.1	28.1	26.2	21.0	3.5	.7
Other building construction.....	26	38	22	24	7	5	122	21.3	31.1	18.0	19.7	5.7	4.1
Other manufacturing.....	191	246	194	192	45	8	876	21.8	28.1	22.1	21.9	5.1	.9
Other metal workers.....	351	451	388	324	78	14	1,606	21.9	28.1	24.1	20.2	4.9	.8
Painters.....	168	234	222	218	54	30	926	18.1	25.3	24.0	23.5	5.8	3.2
Plasterers.....	28	23	23	23	7	5	109	25.7	21.1	21.1	21.1	6.4	4.6
Plumbers.....	90	94	66	59	11	6	326	27.6	28.8	20.2	18.1	3.4	1.8
Printers and engravers.....	133	141	119	130	41	27	591	22.5	23.9	20.1	22.0	6.9	4.6
Professional.....	26	58	27	25	8	2	146	17.8	39.7	18.5	17.1	5.5	1.4
Railway employees.....	44	43	41	36	8	5	177	24.9	34.3	23.2	20.3	4.5	2.8
Sheet-metal workers.....	107	158	111	100	29	9	514	20.8	20.7	21.6	19.5	5.6	1.8
Slaughtering and meat packing employees.....	248	351	334	325	62	31	1,351	18.4	26.0	24.7	24.1	4.6	2.3
Stone and granite workers.....	44	81	67	54	16	11	273	16.1	29.7	24.5	19.8	5.9	4.0
Tanners.....	77	111	86	61	26	9	370	20.8	30.0	23.2	16.5	7.0	2.4
Textile manufacturing employees.....	285	371	319	274	74	20	1,343	21.2	27.6	23.8	20.4	5.5	1.5
Tobacco and cigars.....	271	750	570	514	129	67	2,301	11.8	32.6	24.8	22.3	5.6	2.9
Trade and clerical.....	225	278	190	187	51	23	954	23.6	29.1	19.9	19.6	5.4	2.4
Woodworkers.....	246	345	331	293	82	39	1,336	18.4	25.8	24.8	21.9	6.1	2.9
Miscellaneous.....	458	572	492	435	98	54	2,109	21.7	27.1	23.3	20.6	4.6	2.6
All occupations.....	8,303	12,071	10,468	9,418	2,269	956	43,485	19.1	27.8	24.1	21.6	5.2	2.2

¹ See article on "Disability among wage earners," in MONTHLY LABOR REVIEW, November, 1919, p. 31.

The above table shows occupational disability irrespective of age; that is, the results presented were influenced by the age distribution factor within each occupation.

In Table 6, which follows, all occupational experience as to duration of disability is given for specific and identical 5-year age groups. By means of this table the influence of the age factor can be eliminated as explained in the earlier article¹ and the extent of occupational influence on disability durations ascertained.

TABLE 6.—NUMBER AND PER CENT DISABLED EACH CLASSIFIED NUMBER OF WEEKS, IN EACH OCCUPATIONAL GROUP, BY 5-YEAR AGE GROUPS.

Age group 25 to 29.

Occupation.	Number disabled.						Total.	Per cent disabled.						Total.
	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.		Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	
Auto, carriage, and wagon manufacturing.....	5	3	---	---	1	---	9	55.6	33.3	---	---	11.1	---	100
Barbers.....	9	5	2	3	1	4	24	37.5	20.8	8.3	12.5	4.2	16.7	100
Bartenders.....	5	10	4	2	---	---	21	23.8	47.6	19.0	9.5	---	---	100
Blacksmiths.....	6	14	8	8	---	1	37	16.2	37.8	21.6	21.6	---	2.7	100
Bricklayers.....	13	9	10	9	1	---	42	31.0	21.4	23.8	21.4	2.4	---	100
Carpenters.....	42	39	31	19	4	2	137	30.7	28.5	22.6	13.9	2.9	1.4	100
Clay products manufacturing employees.....	1	2	1	1	1	---	6	16.7	33.3	16.7	16.7	16.7	---	100
Clothing manufacturing employees.....	18	7	9	6	---	2	42	42.8	16.7	21.4	14.3	---	4.8	100
Cooks and waiters.....	8	5	2	6	---	---	21	38.1	23.8	9.5	28.6	---	---	100
Drivers.....	46	41	48	39	4	---	178	25.8	23.0	27.0	21.9	2.2	---	100
Dyers.....	5	7	1	---	1	1	15	33.3	46.6	6.7	---	6.7	6.7	100
Electrical workers.....	10	16	8	9	1	---	44	22.7	36.4	18.2	20.4	2.3	---	100
Engineers and firemen.....	13	16	10	9	1	---	49	26.5	32.7	20.4	18.4	2.0	---	100
Farmers, gardeners, and florists.....	5	8	5	4	---	---	22	22.7	36.4	22.7	18.2	---	---	100
Food employees.....	26	36	19	12	2	1	96	27.1	37.5	19.8	12.5	2.1	1.0	100
Freight handlers.....	4	2	---	5	---	---	11	36.4	18.2	---	45.4	---	---	100
Glassworkers.....	5	10	6	7	---	---	28	17.9	35.7	21.4	25.0	---	---	100
Jewelers.....	7	6	3	---	1	2	19	36.8	31.6	15.8	---	5.3	10.5	100
Laborers, not specified.....	118	154	118	74	9	9	482	24.5	31.9	24.5	15.3	1.9	1.9	100
Leather workers.....	14	16	9	13	3	4	59	23.7	27.1	15.3	22.0	5.1	6.8	100
Liquor manufacturing employees.....	91	102	61	51	10	3	318	28.6	32.1	19.2	16.0	3.1	.9	100
Machinists.....	96	117	91	62	13	4	383	25.1	30.5	23.8	16.2	3.4	1.0	100
Miners.....	40	85	65	46	2	2	240	16.7	35.4	27.1	19.2	.8	.8	100
Molders.....	16	8	20	9	1	---	54	29.6	14.8	37.0	16.7	1.9	---	100
Other building construction employees.....	2	8	2	1	1	---	14	14.3	57.1	14.3	7.1	7.1	---	100
Other manufacturing employees.....	27	25	19	15	2	---	88	30.7	28.4	21.6	17.0	2.3	---	100
Other metal workers.....	41	36	32	25	3	2	139	29.5	25.9	23.0	18.0	2.2	1.4	100
Painters.....	10	21	14	8	3	2	58	17.2	36.2	24.1	13.8	5.2	3.4	100
Plasterers.....	3	1	---	1	---	1	6	50.0	16.7	---	16.7	---	16.7	100
Plumbers.....	28	22	10	15	4	---	79	35.4	27.8	12.7	19.0	5.1	---	100
Printers and engravers.....	19	20	14	15	4	---	72	26.4	27.8	19.4	20.8	5.6	---	100
Professional.....	1	4	3	1	2	---	11	9.1	36.3	27.3	9.1	18.2	---	100
Railway employees.....	6	2	3	1	---	---	12	50.0	16.7	25.0	8.3	---	---	100
Sheet-metal workers.....	17	15	7	8	1	---	43	39.5	34.9	16.3	7.0	2.3	---	100
Slaughtering and meat packing employees.....	24	33	18	15	1	---	91	26.4	36.2	19.8	16.5	1.1	---	100
Stone and granite workers.....	2	5	1	1	2	---	11	18.2	45.4	9.1	9.1	18.2	---	100
Tanners.....	2	---	---	1	---	---	3	66.7	---	---	33.3	---	---	100
Textile manufacturing employees.....	17	25	19	14	1	3	79	21.5	31.6	24.1	17.7	1.3	3.8	100
Tobacco and cigars.....	24	73	39	18	5	4	163	14.7	44.8	23.9	11.0	3.1	2.5	100
Trade and clerical.....	44	42	12	20	7	3	128	34.4	32.8	9.4	15.6	5.5	2.3	100
Woodworkers.....	31	21	10	12	1	---	75	41.3	28.0	13.3	16.0	1.3	---	100
Miscellaneous.....	45	58	30	25	7	2	165	27.3	33.9	18.2	15.2	4.2	1.2	100
All occupations.....	946	1,127	764	585	100	52	3,574	26.5	31.5	21.4	16.4	2.8	1.4	100

¹See article on "Disability among wage earners," in MONTHLY LABOR REVIEW, November, 1919, pp. 31, 32.

DURATION OF WAGE EARNERS' DISABILITIES.

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TABLE 6.—NUMBER AND PER CENT DISABLED EACH CLASSIFIED NUMBER OF WEEKS, IN EACH OCCUPATIONAL GROUP, BY 5-YEAR AGE GROUPS—Continued.

Age group 30 to 34.

Occupation.	Number disabled.							Per cent disabled.						
	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.
Auto, carriage, and wagon manufacturing.....	4	5	4	4	1	—	18	22.2	27.8	22.2	22.2	5.6	—	100
Barbers.....	6	10	6	7	1	—	30	20.0	33.3	20.0	23.3	3.3	—	100
Bartenders.....	9	15	9	8	—	2	43	20.9	34.9	20.9	18.6	—	4.7	100
Blacksmiths.....	13	11	12	8	2	—	46	28.3	23.9	26.1	17.4	4.3	—	100
Bricklayers.....	13	13	12	6	—	—	44	29.5	29.5	27.3	13.6	—	—	100
Carpenters.....	58	79	57	40	8	6	248	23.4	31.9	23.0	16.1	3.2	2.4	100
Clay products manufacturing employees.....	2	1	3	3	4	—	13	15.4	7.7	23.1	23.1	30.7	—	100
Clothing manufacturing employees.....	21	19	12	8	—	1	61	34.4	31.1	19.7	13.1	—	1.6	100
Cooks and waiters.....	15	15	9	4	2	—	45	33.3	33.3	20.0	8.9	4.4	—	100
Drivers.....	53	60	54	46	11	2	223	23.5	26.5	23.9	20.4	4.9	.8	100
Dyers.....	4	4	2	1	—	—	11	36.4	36.4	18.1	9.1	—	—	100
Electrical workers.....	8	16	6	7	1	1	39	20.5	41.0	15.4	17.9	2.6	2.6	100
Engineers and firemen.....	26	24	14	8	1	1	74	35.1	32.4	18.9	10.8	1.4	1.4	100
Farmers, gardeners, and florists.....	3	7	9	2	2	—	23	13.0	30.4	39.1	8.7	8.7	—	100
Food employees.....	33	39	38	24	8	5	147	22.4	26.5	25.9	16.3	5.4	3.4	100
Freight handlers.....	2	1	5	1	—	—	9	22.2	11.1	55.6	11.1	—	—	100
Glassworkers.....	5	6	10	—	2	—	23	21.7	26.1	43.5	—	8.7	—	100
Jewelers.....	5	2	6	4	1	—	18	27.8	11.1	33.3	22.2	5.6	—	100
Laborers, not specified.....	161	174	143	100	11	9	598	26.9	29.1	23.9	16.7	1.8	1.5	100
Leather workers.....	24	28	14	8	—	—	74	32.4	37.8	18.9	10.8	—	—	100
Liquor manufacturing employees.....	135	161	109	83	17	3	508	26.6	31.7	21.5	16.3	3.3	.6	100
Machinists.....	150	155	127	95	18	8	553	27.1	28.0	23.0	17.2	3.3	1.4	100
Miners.....	55	102	64	65	9	5	300	18.3	34.0	21.3	17.7	3.0	1.7	100
Molders.....	29	34	34	22	3	—	122	23.8	27.9	27.9	18.0	2.4	—	100
Other building constructing employees.....	4	2	1	1	—	—	8	50.0	25.0	12.5	12.5	—	—	100
Other manufacturing employees.....	23	26	21	18	5	1	94	24.5	27.7	22.8	19.1	5.3	1.1	100
Other metal workers.....	54	57	35	30	8	—	184	29.3	31.0	19.0	16.3	4.3	—	100
Painters.....	28	18	12	13	4	3	78	35.9	23.1	15.4	16.7	5.1	3.8	100
Plasterers.....	1	—	1	2	1	—	5	20.0	—	20.0	40.0	20.0	—	100
Plumbers.....	15	18	11	11	—	—	55	27.3	32.7	20.0	20.0	—	—	100
Printers and engravers.....	21	17	5	9	3	1	56	37.5	30.4	8.9	16.1	5.3	1.8	100
Professional.....	2	7	2	2	1	1	15	13.3	46.7	13.3	13.3	6.7	6.7	100
Railway employees.....	10	9	6	4	1	1	31	32.3	29.0	19.4	12.9	3.2	3.2	100
Sheet-metal workers.....	19	14	10	7	2	—	52	36.5	26.9	19.2	13.5	3.8	—	100
Slaughtering and meat packing employees.....	46	34	51	31	2	1	165	27.9	20.6	30.9	18.8	1.2	.6	100
Stone and granite workers.....	6	8	7	3	1	—	25	24.0	32.0	28.0	12.0	4.0	—	100
Tanners.....	8	4	4	4	—	—	20	40.0	20.0	20.0	20.0	—	—	100
Textile manufacturing employees.....	31	34	26	23	5	3	122	25.4	27.9	21.3	18.8	4.1	2.5	100
Tobacco and cigars.....	44	92	57	38	10	7	248	17.7	37.1	23.0	15.3	4.0	2.8	100
Trade and clerical.....	35	37	20	13	5	—	110	31.8	33.6	18.2	11.8	4.5	—	100
Woodworkers.....	29	41	21	20	3	—	114	25.4	36.0	18.4	17.5	2.6	—	100
Miscellaneous.....	66	68	43	20	5	5	207	31.3	32.9	20.8	9.6	2.4	2.4	100
All occupations.....	1,276	1,467	1,092	803	158	66	4,862	26.2	30.2	22.5	16.5	3.2	1.4	100

Age group 35 to 39.

Auto, carriage, and wagon manufacturing.....	8	6	4	4	1	1	24	33.3	25.0	16.7	16.7	4.2	4.2	100
Barbers.....	10	13	5	8	—	—	36	27.8	36.1	13.9	22.2	—	—	100
Bartenders.....	9	17	14	23	7	2	72	12.5	23.6	19.4	31.9	9.7	2.8	100
Blacksmiths.....	7	19	17	13	2	2	60	11.7	31.7	28.3	21.7	3.3	3.3	100
Bricklayers.....	17	15	19	10	8	4	68	25.0	22.1	27.9	14.7	4.4	5.9	100
Carpenters.....	91	117	70	74	16	9	377	24.1	31.0	18.6	19.6	4.2	2.4	100
Clay products manufacturing employees.....	1	4	3	4	—	2	14	7.1	28.6	21.4	28.6	—	14.3	100
Clothing manufacturing employees.....	24	28	21	14	3	1	91	26.4	30.8	23.0	15.4	3.3	1.1	100

TABLE 3.—NUMBER AND PER CENT DISABLED EACH CLASSIFIED NUMBER OF WEEKS, IN EACH OCCUPATIONAL GROUP, BY 5-YEAR AGE GROUPS—Continued.

Age group 35 to 39—Concluded.

Occupation.	Number disabled.						Per cent disabled.						Total.	
	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.		25 wks. and over.
Cooks and waiters.....	13	19	16	12	2	.....	62	21.0	30.6	25.8	19.4	3.2	.....	100
Drivers.....	66	78	84	79	15	8	330	20.0	23.6	25.5	23.9	4.5	2.4	100
Dyers.....	2	5	3	7	.....	.....	17	11.8	29.4	17.6	41.2	.....	.....	100
Electrical workers.....	8	9	2	5	1	.....	25	32.0	36.0	8.0	20.0	4.0	.....	100
Engineers and firemen.....	28	25	20	28	6	1	108	25.9	23.1	18.5	25.9	5.6	9	100
Farmers, gardeners, florists.....	4	12	3	6	.....	.....	25	16.0	48.0	12.0	24.0	.....	.....	100
Food employees.....	48	70	60	62	10	5	255	18.8	27.5	23.5	24.3	3.9	2.0	100
Freight handlers.....	4	12	7	12	.....	1	36	11.1	33.3	19.4	33.3	.....	2.8	100
Glassworkers.....	4	8	2	4	2	1	21	19.0	38.1	9.5	19.0	9.5	4.8	100
Jewelers.....	5	5	6	5	1	1	23	21.7	21.7	26.1	21.7	4.3	4.3	100
Laborers, not specified.....	132	178	158	118	27	7	620	21.3	28.7	25.5	19.0	4.4	1.1	100
Leather workers.....	31	34	25	13	4	1	111	30.6	30.6	22.5	11.7	3.6	9	100
Liquor manufacturing employees.....	117	207	145	138	19	12	638	18.3	32.4	22.7	21.6	3.0	1.9	100
Machinists.....	148	197	136	93	23	8	605	24.5	32.5	22.5	15.4	3.8	1.3	100
Miners.....	57	97	95	73	23	10	355	16.0	27.3	26.8	20.6	6.5	2.8	100
Molders.....	25	44	23	25	7	.....	124	20.2	35.5	18.5	20.2	5.6	.....	100
Other building construction employees.....	8	6	3	4	.....	1	22	36.4	27.3	13.6	18.2	.....	4.5	100
Other manufacturing employees.....	34	37	19	19	4	.....	113	30.1	32.7	16.8	16.8	3.5	.....	100
Other metal workers.....	66	69	60	46	7	.....	248	26.6	27.8	24.2	18.5	2.8	.....	100
Painters.....	32	27	27	34	3	4	127	25.2	21.3	21.3	26.8	2.3	3.1	100
Plasterers.....	4	3	2	1	1	.....	11	36.3	27.3	18.2	9.1	9.1	.....	100
Plumbers.....	12	14	11	7	1	.....	45	26.7	31.1	24.4	15.6	2.2	.....	100
Printers and engravers.....	17	14	14	7	13	3	68	25.0	20.6	20.6	10.3	19.1	4.4	100
Professional.....	5	7	2	2	.....	.....	16	31.2	43.8	12.5	12.5	.....	.....	100
Railway employees.....	8	13	13	7	3	.....	44	18.2	29.5	29.5	15.9	6.8	.....	100
Sheet-metal workers.....	12	15	14	6	3	1	51	23.5	29.4	27.5	11.8	5.9	1.9	100
Slaughtering and meat packing employees.....	56	65	58	53	10	2	244	23.0	26.6	23.8	21.7	4.1	8	100
Stone and granite workers.....	7	16	15	10	.....	4	52	13.5	30.8	28.8	19.2	.....	7.7	100
Tanners.....	9	10	11	4	1	.....	36	25.0	27.8	30.5	11.1	2.8	2.8	100
Textile manufacturing employees.....	31	51	41	23	6	.....	152	20.4	33.6	27.0	15.1	3.9	.....	100
Tobacco and cigars.....	44	112	63	50	8	4	281	15.7	39.9	22.4	17.8	2.8	1.4	100
Trade and clerical.....	39	42	28	25	5	4	143	27.2	29.4	19.6	17.5	3.5	2.8	100
Woodworkers.....	26	43	44	18	9	2	142	18.3	30.3	31.0	12.7	6.3	1.4	100
Miscellaneous.....	79	86	72	51	10	7	305	25.9	28.2	23.6	16.7	3.3	2.3	100
All occupations.....	1,351	1,849	1,435	1,197	256	109	6,197	21.8	29.8	23.2	19.3	4.1	1.8	100

Age group 40 to 44.

Auto, carriage, and wagon manufacturing.....	2	4	6	3	.....	.....	15	13.3	26.7	40.0	20.0	.....	.....	100
Barbers.....	9	7	7	15	3	.....	41	21.9	17.1	17.1	36.6	7.3	.....	100
Bartenders.....	18	16	15	22	10	4	85	21.2	18.8	17.6	25.9	11.8	4.7	100
Blacksmiths.....	16	25	24	22	4	5	96	16.7	26.0	25.0	22.9	4.2	5.2	100
Bricklayers.....	20	22	20	18	3	.....	86	23.3	25.5	23.3	20.9	3.5	3.5	100
Carpenters.....	82	119	95	88	13	9	406	20.2	29.3	23.4	21.7	3.2	2.2	100
Clay products manufacturing employees.....	4	8	7	6	2	.....	27	14.8	29.6	25.9	22.2	7.4	.....	100
Clothing manufacturing employees.....	32	47	34	25	4	1	143	22.4	32.8	23.8	17.5	2.8	7	100
Cooks and waiters.....	36	23	23	23	2	6	93	17.2	24.7	24.7	24.7	2.2	6.5	100
Drivers.....	73	112	104	93	25	10	417	17.5	26.9	24.9	22.3	6.0	2.4	100
Dyers.....	3	3	3	3	2	1	15	20.0	20.0	20.0	20.0	13.3	6.7	100
Electrical workers.....	8	10	10	5	1	.....	34	23.5	29.4	29.4	14.7	2.9	.....	100
Engineers and firemen.....	21	43	26	26	8	3	127	16.5	33.8	20.5	20.5	6.3	2.4	100
Farmers, gardeners, florists.....	8	11	15	11	2	2	49	16.3	22.4	30.6	22.4	4.1	4.1	100
Food employees.....	60	79	76	61	20	5	301	20.0	26.2	25.2	20.3	6.6	1.7	100
Freight handlers.....	3	7	15	8	3	2	38	7.9	18.4	39.5	21.0	7.9	5.3	100
Glassworkers.....	8	12	3	6	2	1	32	25.0	37.5	9.4	18.8	6.2	3.1	100
Jewelers.....	7	6	6	3	.....	.....	22	31.8	27.3	27.3	13.6	.....	.....	100
Laborers, not specified.....	188	235	175	136	31	9	774	24.3	30.3	22.6	17.6	4.0	1.2	100

TABLE 6.—NUMBER AND PER CENT DISABLED EACH CLASSIFIED NUMBER OF WEEKS, IN EACH OCCUPATIONAL GROUP, BY 5-YEAR AGE GROUPS—Continued.

Age group 40 to 44.—Concluded.

Occupation.	Number disabled.							Per cent disabled.						
	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.
Leather workers.....	27	33	25	24	4	2	115	23.5	28.7	21.7	20.9	3.5	1.7	100
Liquor manufacturing employees.....	118	217	197	163	39	17	751	15.7	28.9	26.2	21.7	5.2	2.3	100
Machinists.....	134	141	130	117	34	22	578	23.2	24.4	22.5	20.2	5.9	3.8	100
Miners.....	41	90	94	76	21	11	333	12.3	27.0	28.2	22.8	6.3	3.3	100
Molders.....	20	48	38	39	2	2	149	13.4	32.2	25.5	26.2	1.3	1.3	100
Other building construction employees.....	1	6	5	1	.....	.....	13	7.7	46.1	38.5	7.7	.....	.....	100
Other manufacturing employees.....	23	40	28	30	7	.....	128	18.0	31.2	21.9	23.4	5.5	.....	100
Other metal workers.....	64	85	71	48	12	.....	280	22.8	30.4	25.4	17.1	4.3	.....	100
Painters.....	25	51	43	34	10	6	169	14.8	30.2	25.4	20.1	5.9	3.6	100
Plasterers.....	7	8	2	6	1	1	25	28.0	32.0	8.0	24.0	4.0	4.0	100
Plumbers.....	5	8	5	8	1	1	28	17.8	28.6	17.8	28.6	3.6	3.6	100
Printers and engravers.....	24	22	23	24	3	9	105	22.8	21.0	21.9	22.8	2.9	8.6	100
Professional.....	4	7	1	1	.....	.....	13	30.8	53.8	7.7	7.7	.....	.....	100
Railway employees.....	4	6	7	7	2	.....	26	15.4	23.1	26.9	26.9	7.7	.....	100
Sheet-metal workers.....	9	20	17	20	3	1	70	12.8	28.6	24.3	28.6	4.3	1.4	100
Slaughtering and meat packing employees.....	42	78	50	44	12	4	230	18.3	34.0	21.7	19.1	5.2	1.7	100
Stone and granite workers.....	10	10	14	10	2	1	47	21.3	21.3	29.8	21.3	4.2	2.1	100
Tanners.....	7	22	8	9	.....	.....	48	14.6	45.8	16.7	18.7	4.2	.....	100
Textile manufacturing employees.....	55	54	42	46	11	2	210	26.2	25.7	20.0	21.9	5.2	1.0	100
Tobacco and cigars.....	38	106	78	50	2	3	277	13.7	38.3	28.1	18.1	7	1.1	100
Trade and clerical.....	31	32	36	25	7	4	135	23.0	23.7	26.6	18.5	5.2	3.0	100
Woodworkers.....	29	49	53	63	15	8	217	13.4	22.6	24.4	29.0	6.9	3.7	100
Miscellaneous.....	91	86	92	66	14	7	356	25.6	24.2	25.8	18.5	3.9	2.0	100
All occupations.....	1,387	2,008	1,723	1,485	339	162	7,104	19.5	28.3	24.2	20.9	4.8	2.3	100

Age group 45 to 49.

Auto, carriage, and wagon manufacturing.....	7	10	5	3	2	1	28	25.0	35.7	17.9	10.7	7.1	3.6	100
Barbers.....	10	9	6	10	7	1	43	23.2	20.9	14.0	23.3	16.3	2.3	100
Bartenders.....	8	14	20	20	3	1	66	12.1	21.2	30.3	30.3	4.5	1.5	100
Blacksmiths.....	19	19	14	20	1	2	75	25.3	25.3	18.7	26.7	1.3	2.7	100
Bricklayers.....	10	20	21	20	3	2	76	13.2	26.3	27.6	26.3	3.9	2.6	100
Carpenters.....	56	113	126	105	20	10	430	13.0	26.3	29.3	24.4	4.7	2.3	100
Clay products manufacturing employees.....	4	7	5	6	1	.....	23	17.4	30.4	21.7	26.1	4.3	.....	100
Clothing manufacturing employees.....	27	42	47	38	10	1	165	16.4	25.4	28.5	23.0	6.1	6	100
Cooks and waiters.....	14	32	23	24	4	2	99	14.1	32.3	23.2	24.2	4.0	2.0	100
Drivers.....	50	110	114	101	19	8	402	12.4	27.4	28.4	25.1	4.7	2.0	100
Dyers.....	4	5	8	7	1	1	26	15.4	19.2	30.8	26.9	3.8	3.8	100
Electrical workers.....	.....	5	3	6	2	.....	16	.....	31.2	18.8	37.5	12.5	.....	100
Engineers and firemen.....	27	48	44	27	9	4	159	17.0	30.2	27.7	17.0	5.6	2.5	100
Farmers, gardeners, florists.....	9	10	12	7	2	.....	40	22.5	25.0	30.0	17.5	5.0	.....	100
Food employees.....	57	84	85	59	18	4	307	18.6	27.3	27.7	19.2	5.9	1.3	100
Freight handlers.....	4	12	12	10	1	2	41	9.7	29.3	29.3	24.4	2.4	4.9	100
Glassworkers.....	10	16	11	10	1	.....	48	20.8	33.3	22.9	20.8	2.1	.....	100
Jewelers.....	8	7	8	6	.....	.....	1	30	26.7	23.3	26.7	20.0	3.3	100
Laborers, not specified.....	145	223	185	153	39	12	762	19.0	29.3	24.3	20.7	5.1	1.6	100
Leather workers.....	43	39	43	31	8	3	167	25.7	23.4	25.7	18.6	4.8	1.8	100
Liquor manufacturing employees.....	100	166	198	195	45	24	728	13.7	22.8	27.2	26.8	6.2	3.3	100
Machinists.....	70	144	105	108	28	13	468	14.9	30.8	22.4	23.1	6.0	2.8	100
Miners.....	46	89	102	96	18	8	359	12.8	24.8	28.4	26.7	5.0	2.2	100
Molders.....	19	36	25	22	7	1	110	17.3	32.7	22.7	20.0	6.4	.....	100
Other building construction employees.....	3	5	8	4	3	1	24	12.5	20.8	33.3	16.7	12.5	4.2	100
Other manufacturing employees.....	17	40	34	30	6	3	130	13.1	30.8	26.1	23.1	4.6	2.3	100
Other metal workers.....	32	71	62	45	12	1	223	14.3	31.8	27.8	20.2	5.4	.....	100

TABLE 6.—NUMBER AND PER CENT DISABLED EACH CLASSIFIED NUMBER OF WEEKS, IN EACH OCCUPATIONAL GROUP, BY 5-YEAR AGE GROUPS—Continued.

Age group 45 to 49—Concluded.

Occupation	Number disabled.							Per cent disabled.						
	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.
Painters.....	22	41	47	45	8	4	167	13.2	24.6	28.1	26.9	4.8	2.4	100
Plasterers.....	6	4	7	5	2	1	22	27.3	18.2	31.8	22.7	2.4	1.0	100
Plumbers.....	7	8	12	5	2	1	36	19.4	22.2	33.3	13.9	8.3	2.8	100
Printers and engravers.....	15	17	15	17	6	2	72	20.8	23.6	20.8	23.6	8.3	2.8	100
Professional.....	3	7	3	5	1	2	18	16.7	38.9	16.7	27.7	5.6	1.0	100
Railway employees.....	4	7	5	10	1	2	29	13.8	24.1	17.2	34.5	3.4	6.9	100
Sheet-metal workers.....	17	18	17	23	5	2	82	20.7	22.0	20.7	28.0	6.1	2.4	100
Slaughtering and meat packing employees.....	40	48	61	80	9	6	244	16.4	19.7	25.0	32.8	3.7	2.4	100
Stone and granite workers.....	3	14	11	9	5	2	44	6.8	31.8	25.0	20.5	11.4	4.5	100
Tanners.....	16	21	27	15	8	2	89	18.0	23.6	30.3	16.9	9.0	2.2	100
Textile manufacturing employees.....	61	65	63	49	14	5	257	23.7	25.3	24.5	19.1	5.4	2.0	100
Tobacco and cigars.....	43	96	69	64	9	7	288	14.9	33.3	24.0	22.2	3.1	2.4	100
Trade and clerical.....	20	41	30	33	9	3	136	14.7	30.1	22.1	24.3	6.6	2.2	100
Woodworkers.....	51	68	60	52	16	6	259	19.7	26.2	25.5	20.1	6.2	2.3	100
Miscellaneous.....	75	103	87	76	15	6	362	20.7	28.5	24.0	21.0	4.1	1.7	100
All occupations.....	1,182	1,934	1,846	1,656	378	154	7,150	16.5	27.0	25.8	23.2	5.3	2.2	100

Age group 50 to 54.

Auto, carriage, and wagon manufacturing.....	8	8	13	11	2	42	19.0	19.0	31.0	26.2	4.8	100
Barbers.....	9	7	5	5	7	26	34.6	26.9	19.2	19.2	7.7	100
Bartenders.....	7	10	20	8	3	55	12.7	18.2	36.4	14.5	12.7	100
Blacksmiths.....	6	30	22	16	6	81	7.4	37.0	27.2	19.8	7.4	100
Bricklayers.....	9	28	28	15	4	85	10.6	32.9	32.9	17.7	4.7	100
Carpenters.....	59	114	141	135	31	497	11.9	22.9	28.4	27.2	6.2	100
Clay products manufactur- ing employees.....	6	12	7	5	30	30	20.0	40.0	23.3	16.7	100	100
Clothing manufacturing em- ployees.....	21	38	35	44	12	151	13.9	25.2	23.2	29.1	7.9	100
Cooks and waiters.....	8	22	14	21	3	71	11.3	31.0	19.7	29.6	4.2	100
Drivers.....	27	53	68	64	23	244	11.1	21.7	27.9	26.2	9.4	100
Dyers.....	6	15	4	8	1	36	16.7	41.2	11.1	22.2	2.8	100
Electrical workers.....	1	5	2	1	9	11	11.1	55.6	22.2	11.1	100	100
Engineers and firemen.....	18	37	33	23	9	122	14.8	30.3	27.0	18.9	7.1	100
Farmers, gardeners, florists.....	5	7	5	5	3	25	20.0	28.0	20.0	20.0	12.0	100
Food employees.....	32	45	69	52	17	224	14.3	20.1	30.8	23.2	7.6	100
Freight handlers.....	4	7	9	9	8	37	10.8	18.9	24.3	24.3	21.6	100
Glassworkers.....	3	8	7	5	3	27	11.1	29.6	25.9	18.5	11.1	100
Jewelers.....	2	7	2	8	1	20	10.0	35.0	10.0	40.0	5.0	100
Laborers, not specified.....	115	178	182	173	43	708	16.5	25.5	26.0	24.8	6.2	100
Leather workers.....	32	39	40	46	9	174	18.4	22.4	23.0	26.4	5.2	100
Liquor manufacturing em- ployees.....	71	124	152	165	33	553	12.8	22.4	27.5	29.8	6.0	100
Machinists.....	49	79	86	92	25	334	14.7	23.7	25.7	27.5	7.5	100
Miners.....	22	64	72	58	25	246	8.9	26.0	29.3	23.6	10.2	100
Molders.....	17	16	18	20	1	73	23.3	21.9	24.6	27.4	1.4	100
Other building construction employees.....	3	8	1	4	3	19	15.8	42.1	5.3	21.0	15.8	100
Other manufacturing em- ployees.....	16	30	28	33	8	115	13.9	26.1	24.3	28.7	7.0	100
Other metal workers.....	35	50	59	54	14	214	16.4	23.4	27.6	25.2	6.5	100
Painters.....	26	39	45	44	14	174	14.9	22.4	25.9	25.3	8.1	100
Plasterers.....	3	4	7	1	1	17	17.6	23.5	41.2	5.9	5.9	100
Plumbers.....	5	7	4	1	1	19	26.3	36.8	21.0	5.3	5.3	100
Printers and engravers.....	9	9	12	18	3	58	15.5	15.5	20.7	31.0	5.2	100
Professional.....	3	9	4	4	2	22	13.6	40.9	18.2	18.2	9.1	100
Railway employees.....	8	4	3	3	1	19	42.1	21.0	15.8	15.9	5.3	100
Sheet-metal workers.....	14	32	20	10	5	81	17.3	39.5	24.7	12.3	6.2	100
Slaughtering and meat pack- ing employees.....	22	57	63	56	10	217	10.1	26.3	29.0	25.8	4.6	100
Stone and granite workers.....	3	14	11	10	4	45	6.7	31.1	24.4	22.2	8.9	100
Tanners.....	15	21	18	11	2	69	21.7	30.4	26.1	15.9	2.9	100

TABLE 6.—NUMBER AND PER CENT DISABLED EACH CLASSIFIED NUMBER OF WEEKS IN EACH OCCUPATIONAL GROUP, BY 5-YEAR AGE GROUPS—Concluded.

Age group 50 to 54—Concluded.

Occupation.	Number disabled.							Per cent disabled.						
	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.	Under 1 wk.	1 wk. and under 2 wks.	2 wks. and under 4 wks.	4 wks. and under 12 wks.	12 wks. and under 25 wks.	25 wks. and over.	Total.
Textile manufacturing employees.....	37	59	65	46	6	2	215	17.2	27.4	30.2	21.4	2.8	0.9	100
Tobacco and cigars.....	31	82	66	87	24	8	298	10.4	27.5	22.1	29.2	8.1	2.7	100
Trade and clerical.....	13	30	22	26	8	2	101	12.9	29.7	21.8	25.7	7.9	2.0	100
Woodworkers.....	41	56	58	50	15	7	227	18.1	24.7	25.5	22.0	6.6	3.1	100
Miscellaneous.....	38	69	71	77	15	4	274	13.9	25.2	25.9	28.1	5.5	1.4	100
All occupations.....	359	1,533	1,591	1,524	402	135	6,044	14.2	25.4	26.3	25.2	6.7	2.2	100

Age group 55 to 59.

Auto, carriage, and wagon manufacturing.....	3	4	7	6	-----	1	21	14.3	19.0	33.3	28.6	-----	4.8	100
Barbers.....	-----	4	2	3	2	2	13	-----	30.7	15.4	23.1	15.4	15.4	100
Bartenders.....	4	9	7	7	2	1	30	13.3	30.0	23.3	23.3	6.7	3.3	100
Blacksmiths.....	9	19	20	24	6	-----	78	11.5	24.4	25.6	30.8	7.7	-----	100
Bricklayers.....	8	12	23	19	7	6	75	10.7	16.0	30.7	25.3	9.3	8.0	100
Carpenters.....	49	89	111	113	34	6	402	12.2	22.1	27.6	28.1	8.5	1.5	100
Clay products manufacturing employees.....	2	2	5	4	-----	-----	13	15.4	15.4	38.4	30.8	-----	-----	100
Clothing manufacturing employees.....	13	27	31	30	7	5	113	11.5	23.9	27.4	26.6	6.2	4.4	100
Cooks and waiters.....	8	9	18	14	8	2	59	13.6	15.2	30.5	23.7	13.6	3.4	100
Drivers.....	11	26	15	33	6	4	95	11.6	27.4	15.8	34.7	6.3	4.2	100
Dyers.....	5	5	7	13	3	-----	33	15.2	15.2	21.2	39.4	9.0	-----	100
Electrical workers.....	-----	-----	1	2	-----	-----	3	-----	-----	33.3	66.7	-----	-----	100
Engineers and firemen.....	8	19	26	18	9	1	81	9.9	23.5	32.1	22.2	11.1	1.2	100
Farmers, gardeners, florists.....	2	13	4	6	2	1	28	7.1	46.4	14.3	21.4	7.1	3.6	100
Food employees.....	14	20	35	38	14	4	125	11.2	16.0	28.0	30.4	11.2	3.2	100
Freight handlers.....	-----	5	8	4	3	-----	20	-----	25.0	40.0	20.0	15.0	-----	100
Glassworkers.....	2	4	7	8	2	1	24	8.3	16.7	29.2	33.3	8.3	4.2	100
Jewelers.....	4	3	3	6	1	-----	17	23.5	17.6	17.6	35.3	5.9	-----	100
Laborers, not specified.....	56	111	107	119	29	18	440	12.7	25.2	24.3	27.1	6.6	4.1	100
Leather workers.....	15	24	20	30	7	8	104	14.4	23.1	19.2	28.9	6.7	7.7	100
Liquor manufacturing employees.....	34	74	81	81	19	9	298	11.4	24.8	27.2	27.2	6.4	3.0	100
Machinists.....	37	63	58	67	28	6	259	14.3	24.3	22.4	25.9	10.9	2.3	100
Miners.....	17	41	44	57	16	4	179	9.5	22.9	24.6	31.8	8.9	2.2	100
Molders.....	11	15	17	9	2	1	55	20.0	27.3	30.9	16.4	3.6	1.8	100
Other building construction employees.....	2	1	1	4	-----	2	10	20.0	10.0	10.0	40.0	-----	20.0	100
Other manufacturing employees.....	18	22	23	27	4	1	95	18.9	23.2	24.2	28.4	4.2	1.1	100
Other metal workers.....	29	39	36	42	11	3	160	18.1	24.4	22.5	26.2	6.9	1.9	100
Painters.....	13	26	27	20	6	1	93	14.0	28.0	29.0	21.5	6.5	1.0	100
Plasterers.....	-----	1	4	4	1	-----	10	-----	10.0	40.0	40.0	10.0	-----	100
Plumbers.....	1	1	2	2	-----	-----	6	16.7	16.7	33.3	33.3	-----	-----	100
Printers and engravers.....	12	19	17	14	6	2	70	17.1	27.1	24.3	20.0	8.6	2.9	100
Professional.....	1	4	3	5	2	-----	15	6.7	26.7	20.0	33.3	13.3	-----	100
Railway employees.....	1	-----	1	3	-----	2	7	14.3	-----	14.3	42.8	-----	28.6	100
Sheet-metal workers.....	4	25	19	13	7	3	71	5.6	35.2	26.8	18.3	9.9	4.2	100
Slaughtering and meat packing employees.....	7	18	17	27	11	4	84	8.3	21.4	20.2	32.1	13.1	4.8	100
Stone and granite workers.....	11	7	8	9	2	-----	37	29.7	18.9	21.6	24.3	5.4	-----	100
Tanners.....	11	12	9	12	5	1	50	22.0	24.0	18.0	24.0	10.0	2.0	100
Textile manufacturing employees.....	23	41	37	39	13	4	157	14.6	26.1	23.6	24.8	8.3	2.5	100
Tobacco and cigars.....	24	91	104	75	24	12	330	7.3	27.6	31.5	22.7	7.3	3.6	100
Trade and clerical.....	2	16	11	15	8	1	53	3.8	30.2	20.7	28.3	15.1	1.9	100
Woodworkers.....	25	38	48	35	13	10	169	14.8	22.5	28.4	20.7	7.7	5.9	100
Miscellaneous.....	26	45	45	43	12	10	186	14.0	24.2	24.2	25.8	6.4	5.4	100
All occupations.....	522	1,004	1,069	1,105	332	136	4,165	12.5	24.1	25.6	26.5	8.0	3.3	100

INDUSTRIAL RELATIONS.

British Railway Wages.¹

By N. C. ADAMS.

THE industrial situation in England was appreciably eased on January 15 by the decision of the railwaymen's representatives to accept the Government's proposals for the fixing of standard railway wages. Negotiations regarding standardization of wages began in March, 1919,² came to an abrupt halt at the time of the strike³ in September, and were resumed vigorously in October at the cessation of the strike in accordance with the terms of settlement.³ Although the Government's proposals do not by any means concede the full demands of the railwaymen, it is probable that the decision of the delegates of the National Union of Railwaymen will be ratified by the branches, as Mr. J. H. Thomas, the general secretary, and the other leaders have strenuously advised the acceptance of the present offers as being far and away better than anything yet proposed and promising to result ultimately in an approximation to the full demands.

The Government has had a highly technical and difficult task in endeavoring properly to grade railway employees, to standardize rates of pay by grades, and to fix a sliding scale dependent upon the cost of living, subject, however, to the underlying principle that standard wages are to be substantially increased over prewar rates, whatever the cost of living may be.

Course of the Negotiations.

RAILWAYMEN as a class derived scant satisfaction from the strike settlement, because of its indeterminate character. Rumors of uneasiness and of further strikes have been recurrent, therefore, since October. Officials of the Government and of the railwaymen's unions have fully recognized this state of mind and apparently have made strenuous effort to reach an early as well as an equitable settlement as to wages.

The Government through the minister of transport (Sir Eric Geddes) submitted various offers to the railwaymen's executive committee which were deliberated upon but not accepted. The *Railway Review*⁴ of December 19, 1919, announced that the execu-

¹ The following publications have been consulted: *London Times*, *Observer*, *Daily Herald*, and *Railway Review*, and *Manchester Guardian*.

² See *MONTHLY LABOR REVIEW*, June, 1919, pp. 169-177.

³ See *MONTHLY LABOR REVIEW*, December, 1919, pp. 116-127.

⁴ Official organ of the National Union of Railwaymen.

tive committee had received further offers from the Government which in "principle" were a departure from the "national program" (straight upwards standardization) yet "might ultimately provide a basis for settlement." The executive committee, therefore, had decided to send a delegation to interview the Government again, "with a view to obtaining an improvement on the offer to the full extent to which they (the Government) are prepared to go, so that the full terms of the offer may be submitted to a special general meeting." The representatives were instructed to make it plain to the Government that the executive committee was not in a position to accept the "principle" of the new offers, but that their function would be limited to placing it before a delegate meeting (special general meeting) with a recommendation for its acceptance or otherwise.

Finally on January 4 the Government's offers were made known at meetings of railwaymen held in several important centers, but at nearly every meeting the offers were voted unsatisfactory. The Government proposed an immediate and retroactive increase of 5s.¹ per week thus increasing the stabilized minimum of the October agreement from 51s. to 56s. up to September 30, 1920, but after that date standardization in any grade was to be based upon the average rather than upon the highest rates and the guaranteed minimum in a few grades might fall to 40s. which is considerably below what the railwaymen consider a "living wage."

On January 9 the delegate conference, after three days of discussion, rejected the terms offered but remained in being to await a reply to some modifying proposals of the railwaymen. Finally on January 15 the conference by a "very narrow" majority accepted the Government's amended offer, as representing the best terms obtainable at present.

The conference returned six objections to the original offer:

1. The standard wage rates are based on the average, not the highest prewar rate in each grade. (The Government adhered to the average.)
2. The sliding scale based on the cost of living is unacceptable. (The Government considered the scale essential.)
3. Certain grades are not included. (The Government extended the 5s. advance in the war wage to all grades now receiving the war wage.)
4. Hardship would result in individual cases. (The Government agreed to deal with these cases.)
5. Any increase resulting should be retroactive as from August, 1919. (The Government agreed to grant this if the men prefer it to the offer of a general lump-sum payment of £1.)
6. The Irish railways should be included. (The Government agreed to include the Irish railways.)

¹ Normally, the par value of the shilling is 24.3 cents; of the pound sterling, \$4.8665.

It appears that the Government has agreed to a certain measure of elasticity in the detailed application of its proposals, while standing firm on principles. Whether the new terms are equitable or not this policy of the Government may have an alleviating effect. The indecision of the last year has had a disturbing effect upon industry in general, and while the public, having in mind the comparative ease with which the country "carried on" during the recent railway strike, has of late shown little concern, there is ample evidence that the rank and file of the railwaymen had become more and more disinclined to accept anything less than the full terms of their demand for standardization upwards. The railwaymen's leaders have advised the men to accept the Government's offer.

Summary of the Government's Offer.

THE Government's offers as accepted may be summarized as follows:

The average weekly rate on 15 of the largest railway companies has been taken for each grade or group of grades, and the war bonus (33s.), plus an additional 5s., added to make the new abnormal rate which will remain in existence until the end of September, 1920.

A sliding scale is to be instituted after September, 1920. Taking the present cost of living at 125 per cent above normal a rise or fall of five full points will carry an increase or decrease, as the case may be, of 1s. in the new rate of pay. The position is to be considered every three months after September, 1920, by the central wages board.¹

The normal (i. e., standard) rate of pay in each grade is to be the average as described above, plus a minimum of 100 per cent. These "normal rates" form the "stop" for the sliding scale; that is, in each grade no reduction will be made below the "stop" no matter how low the cost of living may fall. The lowest "stop" is 40s., for porters (class 2) outside London; porters, goods depot, class 2 stations; laborers, telegraph department; crossing keepers, and rural permanent-way undermen. The highest "stop" is 75s. for yard foremen (class 1).

A large number of grades have been eliminated, with the result that there will be only 88 grades in place of the 512 now existing in the departments so far dealt with.

A lump sum of £1 is to be paid each man in the grades under consideration in place of making any increase, resulting from the new terms, retroactive to August, 1919, when the drivers' and firemen's wages were standardized.

¹ See page 24.

Analysis of the New Terms.

BEFORE the September strike the Government offered to stabilize wages at their present level to the end of March, 1920, only, but by the terms of the strike settlement the period was extended through September, 1920. Now by the new terms a more real improvement has been secured by the railwaymen in the shape of an extra 5s. per week added to the war bonus, to last at least until September 30.

The sliding-scale system, which is to operate after September, is at least definite and in that respect much more favorable than the one proposed during the strike; also the positive assurance is given of a reviewing of the position every three months.

Before the strike the Government offered standardization at an average of 100 per cent above the prewar rate in each grade, but in the new offer 100 per cent is called a "minimum increase" and so far as the actual wages have been published it is exceeded in every case. Taking porters as an illustration, they are to be placed in three categories, the averages working out at 18s., 20s., and 22s., so that, with the enhanced war bonus added, wages will be 56s., 58s., and 60s., respectively, until September 30, when the sliding scale becomes operative. But the "stops" arranged are 40s., 42s., and 46s., respectively, which are 122 per cent, 110 per cent, and 109 per cent, respectively, above the prewar averages. When one considers the additional 5s. and the fact that there is a dubious prospect of the cost of living decreasing sufficiently to bring the rate of any grade down to the so-called "normal rate," it is apparent that the railwaymen have made a very considerable gain. Indeed, these new terms, taken in conjunction with the eight-hour day and the new arrangements for overtime and Sunday work, granted last year,¹ mark an advance for railway men that would have been thought beyond the bounds of possibility a very short time ago.

The unavoidable complications and delays involved in ascertaining the amounts due each man to whom increases result from the new terms, back to the time when the drivers' standard wages came into force, August, 1919, probably will cause the men to accept instead the lump-sum immediate payment of £1.

The real cause of dissatisfaction with the new offer seems to be the proposed "average" basis of the new terms in place of the "highest rate" basis demanded. But this dissatisfaction is assuaged by the Government having agreed that there shall be no reduction for those now getting prewar rates above the average, other than those reductions after September resulting from the operation of the sliding scale. This agreement should prevent cases of individual hard-

¹ See MONTHLY LABOR REVIEW, June, 1919, p. 176.

ship from arising, and in any event the new wages machinery already provided for¹ should be able to ascertain facts regarding any case and make proper adjustments. With all these advances and improvements, however, the fact remains that there are grades in which it is possible that wages may be reduced to only 40s. per week.

Details of the Government's Offer.

RATES of pay to adults in the various grades, as they stand with the newly added 5s. bonus, in force at least up to the end of September, and the standard rates, or "stops," to which employees may be reduced after September, by the application of the sliding scale, are given in the statement following. These on their face present some startling possible reductions which, if ever effected, might easily prove a disturbing factor. The possible reductions range from 18s. per week for permanent-way undermen in rural districts to 4s. per week for yard foremen (class 1). As before stated there is little chance of their taking place.

WEEKLY RATES OF PAY TO ADULT STAFF.²

Traffic staff.

[Normal par value of shilling is 24.3 cents.]

Grade.	Present rate. ³	Standard rate or "stop."
	<i>Shillings.</i>	<i>Shillings.</i>
Porters, grade 1.....	60	46
Porters, grade 2:		
London.....	58	42
Other places.....	55	40
Crossing keepers.....	56	40
Leading porters:		
London.....	60	45
Other places.....	58	43
Point cleaners and station-lamp men.....	59	43
District relief porters.....	59	48
Signal-lamp men.....	60	46
Horse and carriage porters.....	60	48
Letter sorters.....	60	48
Cloakroom and lost property office attendants:		
Head.....	65	58
Other.....	61	52
Parcel porters:		
Head.....	63	56
Other.....	61	50
Ticket collectors:		
Class 1.....	65	58
Class 2.....	61	54
Excess luggage collectors:		
Class 1.....	65	58
Class 2.....	61	54
Train ticket collectors.....	65	60
Train attendants.....	61	50
Gatemen and ticket collectors on rail, motor, or electric trains who are not in charge of trains.....	61	50
Bill posters.....	61	50
Guards, passenger and goods:		
First and second years.....	60	50
Third and fourth years.....	63	55
Fifth, sixth, and seventh years.....	66	60
Eighth year.....	69	65

¹ See page 24.

² Railway Review (London), January 16, 1920.

³ In effect until Sept. 30, 1920, then subject to sliding scale.

WEEKLY RATES OF PAY TO ADULT STAFF—Continued.

Traffic staff—Concluded.

Grade.	Present rate. ¹	Standard rate or "stop."
	<i>Shillings.</i>	<i>Shillings.</i>
Shunters, passenger and goods:		
Class 1.....	69	65
Class 2.....	66	60
Class 3.....	63	55
Class 4.....	60	50
Station foremen:		
Class 1.....	70	65
Class 2.....	63	58
Parcel foremen:		
Class 1.....	75	66
Class 2.....	71	60
Foremen, ticket collectors:		
Class 1.....	72	65
Class 2.....	68	61
Yard foremen:		
Class 1.....	79	75
Class 2.....	76	70

Goods and cartage staff.

	<i>Goods depot.</i>	
Porters, etc.:		
Class 2 stations.....	57	40
Class 1 stations.....	60	44
London.....	61	47
Callers-off, etc.:		
Class 2 stations.....	60	43
Class 1 stations.....	62	49
London.....	63	52
Checkers, etc.:		
Class 2 stations.....	62	47
Class 1 stations.....	64	54
London.....	66	57
Working foremen, etc.:		
Class 2 stations.....	65	52
Class 1 stations.....	68	59
London.....	71	62
	<i>Cartage.</i>	
Carters, etc.:		
Class 2 stations.....	60	46
Class 1 stations.....	62	50
London.....	64	53
Carters, head:		
Class 2 stations.....	61	49
Class 1 stations.....	64	54
London.....	66	57
Motor drivers:		
Petrol or steam—		
Class 1 stations.....	67	57
London.....	68	60
Electric—		
Class 1 stations.....	66	53
London.....	67	56
Working foremen—horsekeepers, stablemen (in charge):		
Class 2 stations.....	65	52
Class 1 stations.....	68	59
London.....	71	62

¹ In effect until Sept. 30, 1920, then subject to sliding scale.

WEEKLY RATES OF PAY TO ADULT STAFF—Continued.

Permanent-way staff.

Grade.	Area.	Present rate. ¹	Standard rate or "stop."
		<i>Shillings.</i>	<i>Shillings.</i>
Gangers.....	Rural.....	63	48
	Industrial, etc. ²	65	52
	London ³	69	60
	London termini.....	72	65
Subgangers.....	Rural.....	60	43
	Industrial, etc. ²	62	46
	London ³	65	52
	London termini.....	66	55
Undermen.....	Rural.....	58	40
	Industrial, etc. ²	60	44
	London ³	62	48
	London termini.....	63	50

Shed staff—locomotive department.

Steam raisers.....	}	62	48
Fire lighters.....			
Coal men.....			
Fire droppers.....			
Stores issuers.....			
Toolmen.....	}	60	45
Boiler washers.....			
Gland packers.....			
Tube cleaners.....			
Shed laborers.....			
Ash fillers.....	}	59	43
Barmen.....			
Sandmen.....			
Lamp men.....			
Lamp trimmers.....			
Callers-up (adult).....			

Carriage and wagon department staff.

Carriage examiners.....	}	67	60
Wagon examiners.....			
Brake examiners.....	}	65	56
Brake adjusters.....			
Oil-gas makers.....	}	67	58
Oil-gas makers' assistants and firemen.....	}	63	50
Carriage-lamp men.....	}	62	47
Carriage lights.....			
Globe cleaners.....	}	59	45
Oil-gas fillers.....			
Carriage cleaners.....	}	60	44
Brassers.....			
Carriage washers.....	}	58	42
Carriage and wagon oilers and greasers.....			
Axle-box cleaners.....			

¹ In effect until Sept. 30, 1920, then subject to sliding scale.² Industrial and mining areas and large towns and important ports and health resorts.³ As far out as 10 miles from Charing Cross.

WEEKLY RATES OF PAY TO ADULT STAFF—Concluded.

Signal and telegraph staff.

Grade.	Area.	Present rate. ¹	Standard rate or "stop."
Chieflinemen.....	Rural.....	78	60
	Industrial, etc. ²	79	65
	London ³	79	70
Linemen.....	Rural.....	69	57
	Industrial, etc. ²	70	62
	London ³	72	65
Linemen's assistants.....	Rural.....	63	50
	Industrial, etc. ²	64	54
	London ³	65	58
Storesmen.....	Rural.....		
	Industrial, etc. ²	65	55
	London ³	65	57
Electric locking installers, signal locking fitters, signal fixers.....	Rural.....	70	59
	Industrial, etc. ²	71	64
	London ³	73	67
Gangers.....	Rural.....	69	57
	Industrial, etc. ²	73	62
	London ³	75	65
Gangers' assistants.....	Rural.....	63	54
	Industrial, etc. ²	65	59
	London ³	68	62
Wiremen (telegraph).....	Rural.....	64	50
	Industrial, etc. ²	65	54
	London ³	66	58
Laborers.....	Rural.....	58	40
	Industrial, etc. ²	60	44
	London ³	62	48

¹ In effect until Sept. 30, 1920, then subject to sliding scale.² Industrial and mining areas and large towns and important ports and health resorts.³ As far out as 10 miles from Charing Cross.

It is reported that before these terms were accepted by the delegate conference a resolution to refer the matter to the Triple Alliance¹ was introduced but not carried. The transport workers are engaged upon the dockers' demand for a 16s. raise, while the miners are occupied with their nationalization campaign, and at present neither body can afford to drop its own interests to assist the railwaymen. Moreover, it is not likely that the three unions would strike because of the slight differences at present existing between the railwaymen's demands and the Government's offers.

Proposed Participation in Management by Employees.

IN THE meantime there is a new phase of the railwaymen's situation to be considered. On November 16 Mr. Thomas, addressing a meeting of railwaymen at Bristol, announced that the Government proposed to give railwaymen a share in control of the railways by creating the following machinery:

Three union representatives to join the Railway Executive, with coequal powers to the general managers; a joint board, composed of five general managers and five representatives of the unions, to deal with conditions of service; a body of 12 (4 from the men, 4 from the railway companies, and 4 from the public, with an independent chairman) to which will be referred questions on which the joint board fails to agree; bodies set up locally (with an equal number of both management and men) to deal with grievances.

¹ See MONTHLY LABOR REVIEW, June, 1919, pp. 169-177.

The full significance of these new concessions is not yet known and on their face it does not seem that the railwaymen are actually gaining any real share in control. The outstanding fact, however, is that the Government has given full "recognition" to the railway unions, and it should be recalled that the strike of 1911 was virtually for that very object. At that time a reluctant recognition was granted, but this new offer to place union representatives on boards hitherto reserved for general managers of the railways is apparently entirely voluntary on the part of the Government. This is a very long step indeed for the railwaymen to have advanced in a little more than eight years.

Mr. Thomas's first announcement was somewhat vague in that the "railway executive," as such, was, in accordance with the Transport Act of 1919, to cease to exist January 1, 1920, and the new body has now been announced by Sir Eric Geddes as the "railway advisory committee," and includes in its personnel four union officials together with 12 railway officials. No promise has been made as to the extent to which the Ministry of Transport will act upon the advice of this committee. The four union representatives are Mr. Thomas, Mr. C. T. Cramp, industrial secretary of the National Union of Railwaymen, Mr. Bromely, secretary of the Locomotive Engineers, and Mr. A. G. Walkden, secretary of the Railway Clerks' Association, who has not been identified with labor politics, but is devoted to the administrative work of trade-unionism. These men are among the ablest of the railway unions' representatives and may be depended upon to gain for the railwaymen all the voice in control possible in the existing conditions, i. e., an advisory committee with a definite minority representation of the railwaymen, and the retention of all executive functions by the Ministry of Transport.

The joint board (five general managers and five railwaymen) to deal with conditions of service has been named the "Central wages board," and the final court (four from the railway companies, four from the employees, and four from the public, with an independent chairman) is to be known as the "National wages board." Of the four public representatives, one is to be nominated by the parliamentary committee of the Trade-Union Congress, one by the Cooperative Union, one by the Federation of British Industries, and one by the Associated Chambers of Commerce.

Modification of "Right to Strike."

SIR Eric Geddes, speaking in the House of Commons on December 9, said that the railway unions had agreed that no strike should take place until one month after the question in dispute had been referred to the National wages board. This statement would seem

to indicate that the railway unions have definitely accepted the Government's proposition in respect to these three bodies. Still, as long as the standardization negotiations remain unsettled, there is no likelihood of the wages boards functioning, as the offer specifically states that they shall not take up any questions now being negotiated. This would seem to indicate that the wages boards will not be set up till standardization has been definitely accomplished.

This renouncement of the privilege of the instantaneous strike is important. During the 1911 strike the great inconvenience suffered by the public acted as a lever to bring an early victory to the railwaymen; but in 1919 the use of motor transport so eased the situation that the strike may no longer be regarded as an irresistible weapon of the railwaymen.

Trade-unionists as a rule are averse to compulsory arbitration or to any limitation of the right to strike, hence it is not clear that the leaders, who have apparently agreed to the one month postponement, will have an easy task in obtaining the adherence of their members to this provision.

The advisory committee will, it is supposed, terminate as such in August, 1921, when, according to the Ministry of Transport Act, Government control of the railways will cease. The minister has authority, however, to increase rates, which will remain in force, if necessary, for a year and a half after the date specified, and previous compensation provisions to protect the shareholders will remain unassailed. According to the arrangement between the companies and the State, the railways must be returned to their proprietors "unimpaired in net revenue earning capacity." It is little wonder, therefore, that the Government has made a great effort to stick to its original offers, which were supposed to be all the railways could endure. The central and national wages boards, if they prove successfully workable, are likely to be continued, although their composition may be changed. From information at present available it is not known just at what point the central wages board will begin its duties and whether the adjustment of anomalies resulting from the standardization scheme will fall to its lot.

PRICES AND COST OF LIVING.

Retail Prices of Food and Coal in the United States.

RETAIL prices of food are secured by the Bureau of Labor Statistics from retail dealers in 50 cities through monthly reports of actual selling prices on the 15th of each month. These reports represent many thousands of sales to housewives in each of the 50 cities. Prices of 43 food articles¹ are now reported monthly by retail dealers, and prices of storage eggs are secured in January, February, October, November, and December. Quotations are secured on similar grades of commodities in all cities. There are, however, some local differences which must be taken into consideration when any comparison is made of the prices in the different cities.

1. The cut of beef known as "sirloin" in Boston, Mass.; Manchester, N. H.; Philadelphia, Pa.; and Providence, R. I., would be known as "porterhouse" in other cities. In these four cities, owing to the method of dividing the round from the loin, there is no cut that corresponds to "sirloin" in other cities. There is also a greater amount of trimming demanded by the trade in these cities than in others. This is particularly true of Providence, R. I.

2. In Boston, Mass.; Fall River, Mass.; Manchester, N. H.; New Haven, Conn.; Portland, Me.; and Providence, R. I., very little fresh plate beef is sold, and prices are not secured from these cities for this article.

3. The most of the sales in Newark, N. J., are on whole ham instead of the sliced, as in other cities.

There are also other local factors which should be taken into consideration. The cities for which prices are shown are widely separated; some are in localities near the source of supply while others are a greater distance from it, making it necessary to add to the prices a greater amount for transportation. Methods and costs of doing business vary greatly in different localities, due to the demands of customers, and to rentals, wages, and other fixed charges or expenses.

In addition to food prices, the following retail prices are secured from each of the 50 cities listed on page 38:

¹ Retail prices for the following 23 food articles have been secured each month since January, 1913: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lamb, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

In addition to these 23 articles, monthly prices have been secured for the following 5 articles since January, 1915: Canned salmon, navy beans, onions, prunes, and raisins.

Monthly retail prices have been secured since January, 1919, for the following 15 articles: Evaporated milk, oleomargarine, nut margarine, Crisco, rolled oats, corn flakes, Cream of Wheat, macaroni, cabbage, baked beans, canned corn, canned peas, canned tomatoes, bananas, and oranges.

Prices for storage eggs have been secured for January, February, November, and December only of each year including 1919, when prices were also secured for October.

(a) Prices of coal are secured semiannually, and published in the March and September issues of the MONTHLY LABOR REVIEW.

(b) Prices of gas are secured annually and published in the June issue of the MONTHLY LABOR REVIEW.

(c) Prices of dry goods are secured quarterly and published in the April, July, October, and December issues of the MONTHLY LABOR REVIEW.

Retail prices of food for January 15, 1920, show that the cost of 22 articles of food was 2 per cent higher than in December 15, 1919, 9 per cent higher than in January, 1919, and 104 per cent higher than in January, 1913. These comparisons are based on actual retail prices of 22 of the most essential foods,¹ weighted according to the consumption of the average family.

During the month from December 15, 1919, to January 15, 1920, 29 of the 44 articles of food for which prices were secured in 1919 increased as follows: Cabbage, 33 per cent; potatoes, 26 per cent; granulated sugar, 23 per cent; onions, 11 per cent; lamb and rolled oats, 8 per cent each; hens, 7 per cent; plate beef, 6 per cent; flour, 5 per cent; sirloin steak, rib roast, chuck roast, bread, and Cream of Wheat, 4 per cent each; round steak and raisins, 3 per cent each; canned salmon and rice, 2 per cent each; ham, evaporated milk, macaroni, baked beans, tea, coffee, and bananas, 1 per cent each. Bacon, nut margarine, cheese, and Crisco increased less than five-tenths of 1 per cent each.

The 11 articles which decreased in price were: Strictly fresh eggs, 8 per cent; butter, 5 per cent; lard and canned tomatoes, 3 per cent each; pork chops, storage eggs, and oranges, 2 per cent each; fresh milk, canned corn, canned peas, and prunes, 1 per cent each.

Oleomargarine, corn meal, corn flakes, and navy beans were the same in price as in December, 1919.

During the year period, January, 1919, to January, 1920, 25 of the 44 articles for which prices were secured on both dates increased as follows: Onions, 120 per cent; cabbage, 98 per cent; potatoes, 69 per cent; granulated sugar, 65 per cent; raisins, 53 per cent; prunes, 47 per cent; coffee, 41 per cent; rice, 31 per cent; flour, 23 per cent; rolled oats, 18 per cent; canned salmon, 16 per cent; Crisco, 13 per cent; Cream of Wheat and bananas, 11 per cent each; oleomargarine and strictly fresh eggs, 10 per cent each; bread, 8 per cent; fresh milk and corn meal, 6 per cent each; hens and butter, 5 per cent each; evaporated milk and storage eggs, 4 per cent each; lard and macaroni, 2 per cent each; and lamb and tea, 1 per cent each.

Articles which decreased in price during the year were: Navy beans, 18 per cent; plate beef, 16 per cent; bacon, 14 per cent; canned tomatoes, 11 per cent; chuck roast and baked beans, 10 per cent each; pork

¹ See first paragraph of footnote on p. 26. This comparison is based on all the articles for which prices have been secured each month since 1913, weighted according to the consumption of the average family. Lamb, for which the Bureau has no consumption figures, is not included in this comparison.

chops, 8 per cent; ham and canned corn, 6 per cent each; round steak, 5 per cent; rib roast, 4 per cent; cheese and canned peas, 2 per cent each; and sirloin steak, nut margarine, and oranges, 1 per cent each. The price of corn flakes was the same as in January, 1919.

TABLE 1.—AVERAGE RETAIL PRICES AND PER CENT OF INCREASE OR DECREASE JANUARY 15, 1920, COMPARED WITH JANUARY 15, 1919, AND DECEMBER 15, 1919.

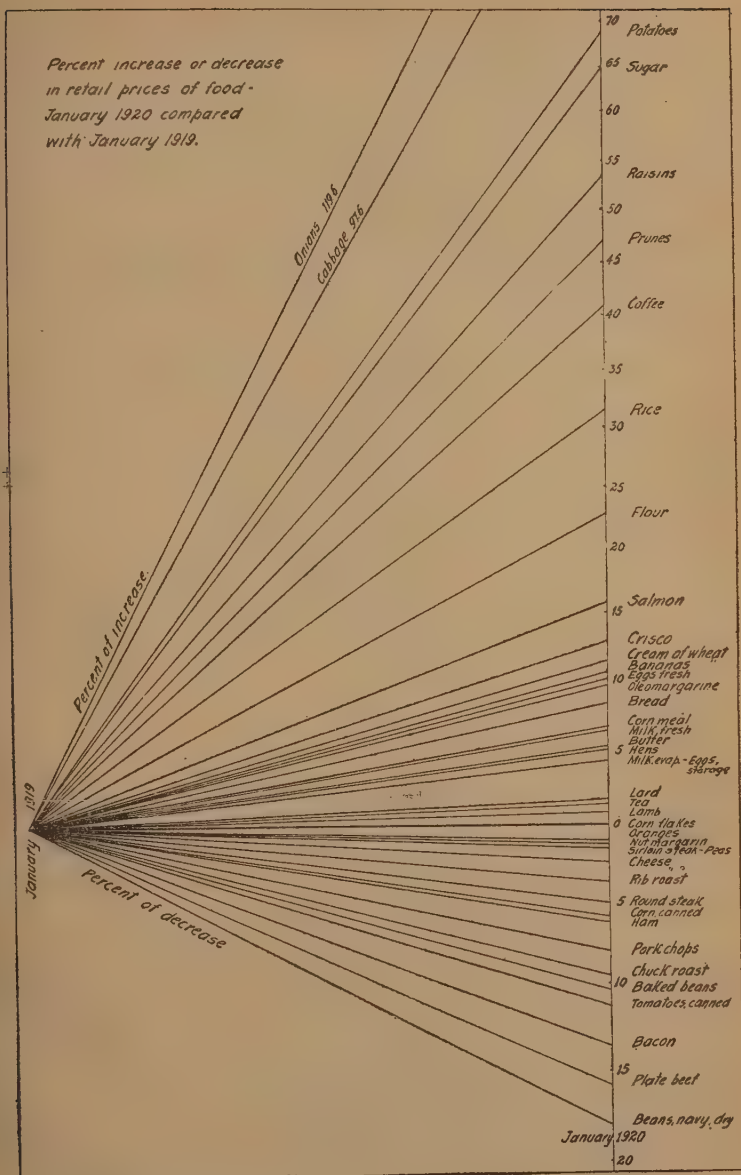
Article.	Unit.	Average retail price.			Per cent of increase (+) or decrease (—) Jan. 15, 1920, compared with—	
		Jan. 15, 1919.	Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15, 1919.	Dec. 15, 1919.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	41.1	39.1	40.5	— 1	+ 4
Round steak.....	do.....	39.0	35.9	37.0	— 5	+ 3
Rib roast.....	do.....	32.6	30.3	31.4	— 4	+ 4
Chuck roast.....	do.....	28.0	24.3	25.3	— 10	+ 4
Plate beef.....	do.....	21.9	17.3	18.4	— 16	+ 6
Pork chops.....	do.....	40.6	38.1	37.3	— 8	— 2
Bacon.....	do.....	58.5	50.3	50.4	— 14	(1)
Ham.....	do.....	53.6	49.9	50.3	— 6	2
Lamb.....	do.....	36.1	33.6	36.4	+ 1	5
Hens.....	do.....	40.0	39.1	42.0	+ 5	+ 7
Salmon, canned.....	do.....	32.1	36.4	37.1	+ 16	+ 2
Milk, fresh.....	Quart.....	15.6	16.7	16.6	+ 6	+ 1
Milk, evaporated (unsweetened).....	15-16-oz. can.....	16.3	16.9	17.0	+ 4	+ 1
Butter.....	Pound.....	70.5	78.0	74.2	+ 5	— 5
Oleomargarine.....	do.....	39.6	43.4	43.4	+ 10	(2)
Nut margarine.....	do.....	36.4	35.8	35.9	— 1	(1)
Cheese.....	do.....	44.5	43.3	43.4	— 2	(1)
Lard.....	do.....	35.4	34.9	34.0	+ 2	— 3
Crisco.....	do.....	33.5	37.7	37.8	+ 13	(1)
Eggs, strictly fresh.....	Dozen.....	75.2	90.1	82.7	+ 10	— 8
Eggs, storage.....	do.....	59.9	63.5	62.5	+ 4	— 2
Bread.....	Pound ³	9.8	10.2	10.6	+ 8	+ 4
Flour.....	Pound.....	6.6	7.7	8.1	+ 23	+ 5
Corn meal.....	do.....	6.2	6.6	6.6	+ 6	(2)
Rolled oats.....	do.....	8.4	9.2	9.9	+ 18	+ 8
Corn flakes.....	8-oz. pkg.....	14.1	14.1	14.1	(3)	(2)
Cream of Wheat.....	28-oz. pkg.....	25.9	27.6	28.8	+ 11	+ 4
Macaroni.....	Pound.....	19.5	19.8	19.9	+ 2	+ 1
Rice.....	do.....	13.8	17.7	18.1	+ 31	+ 2
Beans, navy.....	do.....	14.9	12.2	12.2	— 18	(2)
Potatoes.....	do.....	3.2	4.3	5.4	+ 69	+26
Onions.....	do.....	4.1	8.1	9.0	+120	+11
Cabbage.....	do.....	4.1	6.1	8.1	+ 98	+33
Beans, baked.....	No. 2 can.....	19.1	17.0	17.1	— 10	+ 1
Corn, canned.....	do.....	20.0	18.9	18.8	— 6	— 1
Peas, canned.....	do.....	19.3	19.2	19.0	— 2	— 1
Tomatoes, canned.....	do.....	17.6	16.1	15.6	— 11	— 3
Sugar, granulated.....	Pound.....	10.8	14.5	17.8	+ 65	+23
Tea.....	do.....	69.2	69.3	70.1	+ 1	+ 1
Coffee.....	do.....	35.0	48.9	49.2	+ 41	+ 1
Prunes.....	do.....	19.8	29.3	29.1	+ 47	— 1
Raisins.....	do.....	16.1	23.9	24.7	+ 53	+ 3
Bananas.....	Dozen.....	37.0	40.4	40.9	+ 11	+ 1
Oranges.....	do.....	51.5	52.0	51.0	— 1	— 2
22 weighted articles.....					+ 9	+ 2

¹ Increase of less than five-tenths of 1 per cent. ² No change in price.

³ Baked weight.

⁴ See first paragraph of footnote on p. 26; lamb is not included.

To show more clearly the extent of the change in the price of each article within the last year, the chart on page 29 has been prepared in which the articles are arranged in the order of per cent of change in the year interval, beginning with onions, for which the



price increased 119.6 per cent (in other words, considerably more than doubled), and ending with dry navy beans, for which article, the price decreased 18.1 per cent within the year.

Table 2 lists the articles arranged in the same order as in the chart, from greatest increase to greatest decrease. In order to show minute differences as between articles, the percentage of change is carried to one decimal place; even then there are two instances in which two articles had the same percentage of change.

This table and the chart takes no account of the changes in the months intervening between January, 1919, and January, 1920.

TABLE 2.—ARTICLES LISTED BY PER CENT OF CHANGE IN PRICE BETWEEN JANUARY, 1919, AND JANUARY, 1920.

Articles that increased January, 1919, to January, 1920.	Per cent of in- crease.	Articles that decreased January, 1919, to January, 1920.	Per cent of de- crease.
Onions.....	119.6	Oranges.....	1.0
Cabbage.....	97.6	Nut margarine.....	1.4
Potatoes.....	68.8	Sirloin steak.....	1.5
Sugar.....	64.8	Peas, canned.....	1.5
Raisins.....	53.4	Cheese.....	2.5
Prunes.....	47.0	Rib roast.....	3.7
Coffee.....	40.6	Round steak.....	5.1
Rice.....	31.2	Corn, canned.....	6.0
Flour.....	22.7	Ham.....	6.2
Salmon.....	15.6	Pork chops.....	8.1
Crisco.....	12.8	Chuck roast.....	9.6
Cream of Wheat.....	11.2	Baked beans.....	10.5
Bananas.....	10.5	Tomatoes, canned.....	11.4
Eggs, fresh.....	10.0	Bacon.....	13.3
Oleomargarine.....	9.6	Plate beef.....	16.0
Bread.....	8.2	Beans, navy, dry.....	18.1
Corn meal.....	6.5		
Milk, fresh.....	6.4		
Butter.....	5.2		
Hens.....	5.0		
Milk, evaporated.....	4.3		
Eggs, storage.....	4.3		
Lard.....	1.8		
Tea.....	1.3		
Lamb.....	.8		
Corn flakes.....	(1)		

¹ No change in price.

The chart is drawn on a logarithmic rather than on an arithmetic scale. The logarithmic scale shows better the comparative effect of changing prices than would an arithmetic scale.¹ For, if a commodity changes in price, say from \$1 to \$1.50, the price rises 50 per cent and the capacity to buy this article is diminished by one-third, while if the same commodity changes from \$1 to \$0.50, which means a fall of 50 per cent, the capacity to buy is doubled. A fall of 50 per cent from a given price has therefore a greater effect on the family budget than a 50 per cent rise from the same price and should be shown on a correspondingly larger scale.

For the seven-year period, January, 1913, to January, 1920, 2 of the 24 articles for which prices were secured in January, 1913, and upon which this comparison can be based, increased over 200 per

¹ For discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts," by Lucien W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, The "Ratio" Chart, by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pages.

cent. Potatoes were 238 per cent and granulated sugar 207 per cent higher than in January, 1913. This means that the price in January, 1920, was more than three times what it was in 1913. The price of 9 other articles more than doubled during this period. Pork chops increased 101 per cent; lamb, 102 per cent; hens, 107 per cent; rice, 110 per cent; corn meal, 120 per cent; lard, 121 per cent; strictly fresh eggs, 123 per cent; storage eggs, 143 per cent; and flour, 145 per cent.

TABLE 3.—AVERAGE RETAIL PRICE AND PER CENT OF INCREASE OR DECREASE JANUARY 15, OF EACH SPECIFIED YEAR COMPARED WITH JANUARY 15, 1913.

Article.	Unit.	Average retail price, Jan. 15—								Per cent of increase (+) or decrease (—), Jan. 15 of each specified year compared with Jan. 15, 1913.							
		1913	1914	1915	1916	1917	1918	1919	1920	1914	1915	1916	1917	1918	1919	1920	
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak.....	Pound..	23.8	25.1	25.4	25.7	27.6	32.7	41.1	40.5	+ 5	+ 7	+ 8	+ 16	+ 37	+ 73	+ 70	
Round steak.....	do.....	20.6	22.8	22.8	22.8	24.7	30.6	39.0	37.0	+11	+11	+11	+ 20	+ 49	+ 89	+ 68	
Rib roast.....	do.....	18.7	19.7	19.9	19.9	21.6	25.8	32.6	31.4	+ 5	+ 6	+ 8	+ 16	+ 38	+ 74	+ 68	
Chuck roast.....	do.....	14.9	16.9	16.3	16.2	17.4	22.1	28.0	25.3	+13	+ 9	+ 9	+ 17	+ 48	+ 88	+ 70	
Plate beef.....	do.....	11.0	12.3	12.4	12.0	13.2	17.2	21.9	18.4	+12	+13	+ 9	+ 20	+ 56	+ 99	+ 67	
Pork chops.....	do.....	18.6	20.7	18.6	18.6	23.6	34.3	40.6	37.3	+11	(1)	(1)	+ 27	+ 84	+118	+101	
Bacon.....	do.....	25.5	26.4	27.3	27.3	29.6	48.6	58.5	50.4	+ 4	+ 7	+ 7	+ 16	+ 91	+129	+ 98	
Ham.....	do.....	25.3	26.5	26.5	29.4	30.6	43.6	53.6	50.3	+ 5	+ 5	+16	+ 21	+ 72	+112	+ 99	
Lamb.....	do.....	18.0	18.8	20.6	20.5	23.9	30.8	36.1	36.4	+ 4	+14	+14	+ 33	+ 71	+101	+102	
Hens.....	do.....	20.3	21.2	20.3	21.7	25.5	32.9	40.0	42.0	+ 4	(1)	+ 7	+ 26	+ 62	+ 97	+107	
Salmon, canned.....	do.....			19.8	20.0	21.4	29.2	32.1	37.1								
Milk, fresh.....	Quart..	8.9	9.1	9.0	8.9	9.9	13.4	15.6	16.6	+ 2	+ 1	(1)	+ 11	+ 51	+ 76	+ 87	
Mill, evaporated, unsweetened.....	15-16 oz. can.							16.3	17.0								
Butter.....	Pound..	41.0	39.8	38.6	38.2	45.3	56.7	70.5	74.2	- 3	- 6	- 7	+ 10	+ 38	+ 72	+ 81	
Oleomargarine.....	do.....							39.6	43.4								
Nut margarine.....	do.....							36.4	35.9								
Cheese.....	do.....	22.2	22.9	23.2	24.3	31.2	34.5	44.5	43.4	+ 3	+ 5	+ 9	+ 41	+ 55	+100	+ 95	
Lard.....	do.....	15.4	15.8	15.4	17.5	21.4	32.9	33.4	34.0	+ 3	(1)	+14	+ 39	+114	+117	+121	
Crisco.....	do.....							33.5	37.8								
Eggs, strictly fresh..	Dozen..	37.1	43.5	44.3	42.4	54.4	67.4	75.2	82.7	+17	+19	+14	+ 47	+ 82	+103	+123	
Eggs, storage.....	do.....	25.7						59.9	62.5						+134	+143	
Bread.....	Pound ² .	5.6	6.2	6.8	7.0	7.9	9.3	9.8	10.6	+11	+21	+25	+ 41	+ 66	+ 75	+ 89	
Flour.....	Pound..	3.3	3.2	4.0	3.9	5.6	6.6	6.6	8.1	- 3	+21	+18	+ 70	+100	+100	+145	
Corn meal.....	do.....	3.0	3.1	3.3	3.2	4.0	7.0	6.2	6.6	+ 3	+10	+ 7	+ 33	+133	+107	+120	
Rollod oats.....	do.....							8.4	9.9								
Corn flakes.....	8-oz. pkg.							14.1	14.1								
Cream of Wheat.....	28-oz. pkg.							25.9	28.8								
Macaroni.....	Pound..							19.5	19.9								
Rice.....	do.....	8.6	8.7	9.1	9.1	9.1	11.7	13.8	18.1	+ 1	+ 6	+ 6	+ 6	+ 36	+ 60	+110	
Beans, navy.....	do.....			7.3	9.1	14.5	18.5	14.9	12.2								
Potatoes.....	do.....	1.6	1.9	1.5	2.4	3.9	3.2	3.2	5.4	+19	- 6	+50	+144	+100	+100	+238	
Onions.....	do.....			3.4	4.1	6.9	5.0	4.1	9.0								
Cabbage.....	do.....							4.1	8.1								
Beans, baked.....	No. 2 can							19.1	17.1								
Corn, canned.....	do.....							20.0	18.8								
Peas, canned.....	do.....							19.3	19.0								
Tomatoes, canned.....	do.....							17.6	15.6								
Sugar, granulated.....	Pound..	5.8	5.2	6.0	6.7	8.0	9.5	10.8	17.8	-10	+ 3	+16	+ 38	+ 64	+ 86	+207	
Tea.....	do.....	54.3	54.5	54.6	54.6	54.6	62.3	69.2	70.1	(³)	+ 1	+ 1	+ 1	+ 15	+ 27	+ 29	
Coffee.....	do.....	29.9	29.6	29.9	29.9	29.9	30.4	35.0	49.2	- 7	(1)	(1)	(1)	+ 2	+ 17	+ 65	
Prunes.....	do.....			13.7	13.3	13.9	16.4	19.8	29.1								
Raisins.....	do.....			12.5	12.6	14.1	15.0	16.1	24.7								
Bananas.....	Dozen..							37.0	40.9								
Oranges.....	do.....							51.5	51.0								
22 weighted articles ⁴										+ 5	+ 5	+ 9	+ 29	+ 62	+ 88	+104	

¹ No change in price.

² Baked weight.

³ Increase of less than five-tenths of 1 per cent.

⁴ See first paragraph of footnote on p. 26; lamb is not included.

In Table 4 are given the average prices for each of the 44 articles of food for each month of 1919 and for the years 1913 and 1919. The percentage changes in the prices of each of the articles for which prices were secured in 1913 are shown in Table 6, on page 36. These relative figures show the relation that the price of each article for each month, January, 1913, to January, 1920, bears to the average price of each article in the year 1913.

Table 5 shows for each month of 1919, and for the years 1913 and 1919, the average family expenditure for 22 articles of food¹ weighted according to the consumption of the average family. The percentage changes in these expenditures, as compared with the average expenditure in the year 1913, are shown by the use of relative figures. For example, the average expenditure in the year 1919 is represented by the relative figure 186 when the average expenditure for the year 1913 is taken as the base, or 100. This shows a percentage increase of 86 per cent. These relative figures are also shown in the last column of Table 6.

¹ See first paragraph of footnote on p. 26; lamb is not included.

TABLE 4.—AVERAGE RETAIL PRICES AND AVERAGE FAMILY EXPENDITURES FOR CERTAIN SPECIFIED ARTICLES OF FOOD FOR THE YEAR 1913, JANUARY TO DECEMBER, 1919, INCLUSIVE, AND FOR THE YEAR 1919.

Article.	Unit.	Year 1913.	1919												Year 1919.
			Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
			Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
Sirloin steak.....	Lb.	25.4	41.1	41.2	41.8	43.7	44.4	43.1	43.4	42.1	40.9	39.8	39.3	39.1	41.7
Round steak.....	Lb.	22.3	39.0	38.8	39.4	40.5	41.6	40.4	40.7	39.5	37.9	36.9	36.2	35.9	38.9
Rib roast.....	Lb.	19.8	32.6	32.6	33.4	34.6	35.2	33.8	33.5	32.4	31.2	30.6	30.2	30.3	32.5
Chuck roast.....	Lb.	16.0	28.0	27.9	28.4	29.4	29.7	28.1	27.7	26.6	25.3	24.5	24.2	24.3	27.0
Plate beef.....	Lb.	12.1	21.9	21.9	22.1	22.6	22.5	21.0	20.3	19.3	18.2	17.6	17.3	17.3	20.2
Pork chops.....	Lb.	21.0	40.6	37.9	38.6	41.4	43.0	42.4	46.2	46.9	46.0	44.3	42.1	38.1	42.3
Bacon, sliced.....	Lb.	27.0	58.5	55.3	54.9	57.2	56.7	57.2	58.1	57.7	55.6	52.8	51.0	50.3	55.4
Ham, sliced.....	Lb.	26.9	53.6	51.8	51.4	52.9	54.5	55.2	56.7	56.9	55.2	52.4	50.5	49.9	53.4
Lamb.....	Lb.	18.9	36.1	36.4	38.0	39.9	39.6	38.4	38.2	36.4	34.6	33.9	33.4	33.6	36.5
Hens.....	Lb.	21.3	40.0	39.6	41.1	43.0	43.5	42.6	42.0	41.8	41.4	40.3	39.2	39.1	41.1
Salmon, canned.....	Lb.	.....	32.1	31.7	32.1	32.2	31.9	32.0	32.2	32.3	33.6	34.8	35.7	36.4	33.1
Milk, fresh.....	Qt.	8.9	15.6	15.5	15.3	15.0	14.9	14.9	15.0	15.5	15.7	16.0	16.4	16.7	15.5
Milk, evaporated (unsweetened).....	(1)	.....	16.3	16.4	15.3	15.0	15.1	15.4	15.9	16.3	16.5	16.6	16.8	16.9	16.0
Butter.....	Lb.	38.3	70.5	57.2	66.5	71.3	67.9	63.3	62.8	64.1	65.7	71.1	75.4	78.0	67.8
Oleomargarine.....	Lb.	.....	39.6	39.2	39.9	39.2	40.4	41.4	41.9	42.5	42.8	42.6	43.0	43.4	41.3
Nut margarine.....	Lb.	.....	36.4	35.9	35.5	35.2	35.3	35.4	35.7	35.8	35.8	35.8	35.8	35.8	35.7
Cheese.....	Lb.	22.1	41.5	40.9	40.5	41.9	42.2	42.4	43.0	43.5	43.0	42.4	43.0	43.3	42.6
Lard.....	Lb.	15.8	33.4	32.1	33.1	35.3	38.8	40.2	42.0	42.0	42.0	38.2	36.1	36.5	36.9
Crisco.....	Lb.	.....	33.5	33.8	33.2	33.4	33.9	35.3	38.9	40.5	39.5	37.5	37.8	37.7	36.3
Eggs, strictly fresh.....	Doz.	34.5	75.2	50.6	48.3	49.3	53.1	53.5	56.6	60.2	63.2	72.0	81.0	90.1	62.8
Eggs, storage.....	Doz.	.....	59.9	59.9	.....	.....	.....	.....	.....	.....	.....	59.2	61.8	63.5	.....
Bread.....	Lb. ²	5.7	9.8	9.8	9.8	9.8	9.8	9.9	10.0	10.1	10.1	10.1	10.2	10.2	10.0
Flour.....	Lb.	3.3	6.6	6.7	6.8	7.2	7.5	7.5	7.4	7.3	7.3	7.3	7.4	7.7	7.2
Corn meal.....	Lb.	3.0	6.2	6.0	5.9	6.0	6.2	6.3	6.5	6.6	6.7	6.6	6.6	6.6	6.4
Rollod oats.....	Lb.	.....	8.4	8.4	8.3	8.4	8.5	8.5	8.7	8.9	9.1	9.2	9.2	9.2	8.7
Corn flakes.....	(3)	.....	14.1	14.1	14.1	14.0	14.1	14.0	14.1	14.0	14.0	14.1	14.1	14.1	14.1
Cream of Wheat.....	(4)	.....	25.9	25.1	25.1	25.0	25.1	25.1	25.2	25.1	25.1	25.2	25.2	27.6	25.4
Macaroni.....	Lb.	.....	19.5	19.4	19.3	19.3	19.3	19.3	19.4	19.3	19.4	19.4	19.6	19.8	19.4
Rice.....	Lb.	8.7	13.8	14.3	13.4	13.4	13.4	13.8	14.6	15.5	16.5	17.3	17.6	17.7	15.1
Beans, navy.....	Lb.	.....	14.9	13.7	12.5	12.1	12.0	12.1	12.1	12.3	12.4	12.5	12.3	12.2	12.6
Potatoes.....	Lb.	1.7	3.2	3.1	2.9	3.1	3.3	3.8	4.8	5.0	4.3	3.8	3.9	4.3	3.8
Onions.....	Lb.	.....	4.1	4.3	6.0	6.9	10.7	11.2	9.8	7.8	6.5	6.3	6.9	8.1	7.4
Cabbage.....	Lb.	.....	4.1	4.3	5.3	9.1	9.6	6.8	6.2	5.3	4.9	4.5	4.5	6.1	5.9
Beans, baked.....	(6)	.....	19.1	18.6	18.1	17.7	17.5	17.3	17.3	17.1	17.1	17.1	17.0	17.0	17.6
Corn, canned.....	(5)	.....	20.0	19.6	19.3	19.2	19.1	19.1	19.3	19.1	19.2	19.1	18.9	18.9	19.2
Peas, canned.....	(6)	.....	19.3	19.2	19.0	19.0	19.0	19.0	19.2	19.1	19.2	19.1	19.1	19.2	19.1
Tomatoes, canned.....	(5)	.....	17.6	17.0	16.4	15.9	15.8	15.9	16.1	15.9	16.0	16.1	16.1	16.1	16.2
Sugar, granulated.....	Lb.	5.5	10.8	10.7	10.6	10.6	10.6	10.6	10.9	11.1	11.0	11.4	12.5	14.5	11.3
Tea.....	Lb.	54.4	69.2	68.4	70.4	69.7	69.8	70.1	70.5	70.7	70.7	71.0	71.3	69.3	70.1
Coffee.....	Lb.	29.8	35.0	36.6	37.6	38.5	40.5	42.6	46.2	47.8	48.3	48.6	48.9	48.9	43.3
Prunes.....	Lb.	.....	19.8	20.3	20.9	21.9	23.2	25.4	26.5	27.4	28.0	29.0	30.2	29.3	25.2
Raisins.....	Lb.	.....	16.1	16.2	16.4	16.3	16.5	16.8	17.3	18.0	19.4	20.9	22.7	23.9	18.4
Bananas.....	Doz.	.....	37.0	35.0	36.6	37.6	38.8	38.2	39.2	39.1	38.4	39.3	39.9	40.4	38.3
Oranges.....	Doz.	.....	51.5	46.8	53.2	55.5	54.1	54.4	53.4	53.7	53.9	55.3	54.2	52.0	53.2

¹ 15-16-ounce can.² 8-ounce package.⁶ No. 2 can.³ Baked weight.⁴ 28-ounce package.TABLE 5.—AVERAGE ACTUAL AND RELATIVE FAMILY EXPENDITURE FOR 22 FOOD ARTICLES.¹

Year 1913.	1919.												Year 1919.
	Jan. ²	Feb. ²	Mar. ²	Apr. ²	May. ²	June. ²	July. ²	Aug. ²	Sept. ²	Oct. ²	Nov. ²	Dec. ²	
\$343.94	\$636.97	\$591.70	\$602.88	\$624.82	\$635.83	\$632.79	\$653.39	\$659.70	\$617.73	\$648.62	\$661.08	\$676.22	\$639.26
100	185	172	175	182	185	184	190	192	188	189	192	197	186

¹ See first paragraph of footnote on p. 26; lamb is not included.² Cost of year's supply at prices charged in specified month.

Relative Retail Prices of 22 Articles of Food.

IN TABLE 6 the average monthly and yearly prices of 22 food articles¹ are shown as relative prices or *percentages* of the average prices for the year 1913. These relatives are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. The relative prices or percentages are computed to enable the reader more readily to grasp the *per cent* of change in the prices of an article. Relative prices must be used with caution, however. For example, the relative price of pork chops in November, 1919, was 200, which means that the money price was 200 per cent of the money price in 1913 or, in other words, the price doubled. The relative price of pork chops in December was 181, showing a drop of 19 points since November. This is not a drop of 19 per cent. It is a drop of 19 points from 200, which is a decrease of only 9.5 per cent.

In the last column of this table are given index numbers showing the changes by months and years in the retail cost of the 22 food articles weighted according to the importance of each article in the consumption of the average family. To aid the general reader, a brief description of the method used to compute these index numbers is given. The average price per unit of each commodity is multiplied by the number of units of that commodity consumed by the average family. The products are the cost to the average family of each of the 22 food articles. These products for each month and year are added. The aggregates thus obtained give the cost to the average family for each month and year of the 22 food articles. These aggregates show the actual money cost of the family market basket for each month and year. It would be very difficult to see at a glance the percentage changes in the cost of the family market basket from these aggregate money costs. The aggregates are therefore changed to percentages of the aggregate cost for the year 1913 by dividing each aggregate by the 1913 aggregate. The principle is the same as that used in converting the money prices of individual articles into relatives or percentages of the 1913 prices. The percentages thus obtained are called index numbers. They show what the cost of the family market basket is in each month and year in percentages of the cost of the same market basket in the year 1913. Since index numbers are merely relatives or percentages of the prices of a group of commodities, they must be used with all the caution required in the use of relative prices in general. Prices are obtained each month for 43 food articles, but only 22 of these articles are included in the retail food price index because the amounts consumed by the average family have been obtained as yet for only these 22 articles. Those

¹ See first paragraph of footnote on p. 28; lamb is not included.

articles comprise about two-thirds of the entire food budget of the average family and reflect with great accuracy *changes* in the cost of the food budget.

From September, 1915, there has been a steady increase in the cost of these 22 articles of food. In December, 1918, the cost of these foods was 87 per cent above the 1913 average. In January, 1919, there was a slight decline. February prices declined 7 per cent, but from that date until June the prices advanced. In June there was a decline of less than five-tenths of 1 per cent. July prices increased 3 per cent. August prices showed a further increase of 1 per cent, reaching the highest level up to that date. In September there was a decrease of 2 per cent; in October, a further decrease of two-tenths of 1 per cent; but in November, there was an increase of more than 2 per cent, which brought the cost up to the previous high-water mark in August. In December there was a further increase of 2.6 per cent. This made the cost in December of these 22 food articles 2.6 per cent higher than ever. In January, 1920, there was a further increase of 2 per cent. Using the average cost in the year 1913 as the base, or 100, the relative figure representing the January cost was 201, or an increase of 101 per cent over the year 1913, which means that the price of these 22 foods has more than doubled since 1913.

TABLE 6.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, JANUARY, 1913, TO JANUARY, 1920.

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef, chops.	Pork.	Bar. con.	Ham.	Lard.	Hons.	Eggs.	But. fat.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Potatoes.	Sugar.	Coffee.	Tea.	22 weight- ed articles.
1913: Av. for year.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
January.....	94	92	95	93	89	89	94	93	97	95	108	107	100	100	100	100	99	99	91	106	100	100	98
February.....	94	93	95	93	90	90	95	94	98	97	91	108	100	100	100	100	98	99	90	100	100	100	97
March.....	97	96	98	98	97	97	97	97	100	100	77	106	100	100	100	100	98	99	88	99	100	100	97
April.....	101	99	101	101	103	103	99	99	100	101	73	106	100	100	100	100	98	99	87	98	100	100	98
May.....	102	101	101	101	101	100	100	102	100	101	76	94	99	99	100	101	98	99	91	97	100	100	97
June.....	104	104	102	103	103	103	104	104	101	102	81	92	99	99	100	101	98	99	104	97	100	100	98
July.....	103	104	101	103	108	108	104	106	102	101	96	92	100	99	100	101	98	100	110	100	100	100	98
August.....	103	104	101	103	102	107	103	102	101	100	109	98	100	100	100	100	100	100	109	102	100	100	100
September.....	100	102	101	102	102	102	101	100	101	97	114	101	102	102	100	100	103	100	109	102	100	100	101
October.....	101	101	101	101	103	103	104	105	104	102	138	104	104	102	100	99	104	100	107	99	100	100	104
November.....	100	102	101	101	103	103	104	105	106	102	102	104	104	100	112	104	105	101	108	108	100	100	105
December.....	99	101	102	101	102	97	99	99	100	98	106	104	104	102	110	98	104	100	108	95	98	100	104
1914: Av. for year.	102	106	103	104	104	105	102	102	89	102	102	94	104	100	110	99	103	100	108	94	98	100	101
January.....	99	102	100	102	99	98	98	98	99	104	106	93	104	102	110	99	103	100	108	94	98	100	101
February.....	99	102	101	103	102	100	98	99	99	105	90	92	105	101	110	99	103	100	108	93	100	100	99
March.....	100	103	101	102	103	103	99	99	99	108	71	85	104	100	110	99	103	100	105	91	100	100	97
April.....	100	103	102	103	103	103	99	99	99	108	77	85	103	100	110	99	103	100	105	91	100	100	98
May.....	102	105	102	103	103	103	106	99	99	108	82	88	103	100	110	99	103	100	132	93	100	101	99
June.....	103	106	103	104	106	106	101	103	97	103	87	89	103	100	110	98	105	101	155	95	99	101	102
July.....	106	109	105	106	104	106	101	103	97	103	107	98	104	100	112	106	105	101	111	143	100	101	107
August.....	110	113	108	109	107	119	107	108	99	104	139	103	104	100	114	111	109	101	105	145	100	101	107
September.....	107	110	105	108	107	113	108	108	99	103	107	98	104	100	114	112	109	101	89	132	99	101	105
October.....	103	107	104	106	106	110	106	105	98	100	113	98	104	101	114	113	109	101	83	113	99	101	105
November.....	100	105	103	104	105	104	103	102	99	97	101	103	104	101	116	113	107	101	84	110	99	101	105
December.....	101	103	101	103	103	103	103	102	99	97	139	103	105	99	124	126	108	104	89	120	101	100	105
1915: Av. for year.	101	103	101	101	102	102	101	97	93	97	99	93	105	101	120	124	109	104	85	110	103	100	101
January.....	98	100	100	99	101	85	99	96	97	97	98	98	106	100	126	138	110	104	84	118	101	100	103
February.....	97	99	99	98	100	85	98	95	96	97	74	94	106	99	126	136	110	104	85	118	101	100	101
March.....	99	100	100	99	100	94	98	91	96	100	72	94	105	99	126	137	109	104	86	122	101	100	98
April.....	101	103	101	101	101	98	99	97	95	98	76	91	106	98	128	139	109	104	89	124	101	100	99
May.....	103	105	103	103	101	98	99	97	95	98	81	90	105	98	128	139	109	104	89	124	101	100	100
June.....	105	107	104	103	101	100	100	98	93	97	88	88	103	99	126	125	108	104	85	127	101	100	100
July.....	104	106	104	103	101	103	100	98	93	97	88	88	103	99	126	124	108	104	82	123	101	100	100
August.....	103	104	102	101	107	107	100	97	88	97	101	88	103	99	124	117	108	104	82	123	101	100	101
September.....	104	106	103	102	101	103	100	97	88	97	117	92	104	100	124	113	108	104	79	118	100	100	101
October.....	103	104	102	101	101	99	101	99	91	97	117	92	104	100	124	113	108	104	94	111	100	100	103
November.....	101	102	101	99	98	99	101	100	92	95	135	95	105	100	122	113	107	104	97	119	100	100	103
December.....	99	101	100	99	98	97	101	100	92	95	135	101	107	100	122	114	107	104	106	124	100	100	104
1916: Av. for year.	108	110	107	106	108	108	106	109	111	111	109	103	117	102	130	135	113	105	155	146	100	100	105
January.....	101	102	101	107	107	107	106	109	109	101	123	100	110	100	122	120	107	105	136	123	100	100	107
February.....	101	102	102	99	100	92	101	102	94	104	101	99	112	100	124	125	108	104	141	125	100	100	106

March.....	104	104	104	103	102	104	103	104	103	104	96	107	82	105	113	100	124	107	100	100	107	201
April.....	106	106	106	106	105	107	104	107	104	107	100	111	79	108	113	99	124	108	104	138	100	109
May.....	109	112	110	109	107	109	105	109	105	113	106	113	82	97	112	99	124	119	108	140	100	109
June.....	113	117	113	111	110	107	110	107	110	108	114	114	87	95	111	99	124	117	108	167	100	111
July.....	113	116	111	110	107	111	107	110	107	111	110	113	93	93	110	100	124	116	108	105	134	100
August.....	112	115	111	110	107	110	107	110	107	111	111	112	103	95	111	101	126	134	110	105	141	100
September.....	111	115	110	107	107	107	107	107	107	110	111	112	102	102	116	102	136	148	113	105	161	100
October.....	108	111	108	106	106	106	106	106	106	111	111	112	103	103	116	102	136	148	113	105	165	100
November.....	106	108	106	106	106	106	106	106	106	111	111	112	102	102	116	102	136	148	113	105	165	100
December.....	106	107	106	106	106	106	106	106	106	111	111	112	102	102	116	102	136	148	113	105	165	100
1917: Av. for year.	124	130	131	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	146
January.....	109	111	109	108	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	128
February.....	113	117	114	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	133
March.....	116	119	118	128	121	133	132	146	141	141	141	141	141	141	141	141	141	141	141	141	141	145
April.....	127	130	131	132	134	135	146	155	145	145	145	145	145	145	145	145	145	145	145	145	145	151
May.....	125	133	130	134	135	146	155	145	145	145	145	145	145	145	145	145	145	145	145	145	145	151
June.....	129	135	132	137	136	151	169	147	174	174	174	174	174	174	174	174	174	174	174	174	174	188
July.....	129	137	130	136	136	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164	188
August.....	131	138	131	137	135	165	185	179	159	207	138	146	160	147	158	114	140	206	181	172	170	102
September.....	131	138	131	137	135	165	185	179	159	207	138	146	160	147	158	114	140	206	181	172	170	102
October.....	124	133	127	132	134	134	161	181	163	209	170	131	122	140	148	125	176	206	181	172	170	102
November.....	126	134	128	132	134	134	161	181	163	209	170	131	122	140	148	125	176	206	181	172	170	102
December.....	126	134	128	132	134	134	161	181	163	209	170	131	122	140	148	125	176	206	181	172	170	102
1918: Av. for year.	153	165	166	170	183	196	178	211	211	211	211	211	211	211	211	211	211	211	211	211	211	188
January.....	129	137	130	138	142	146	160	179	163	209	170	131	122	140	148	125	176	206	181	172	170	102
February.....	131	141	133	142	146	160	179	163	209	170	131	122	140	148	125	176	206	181	172	170	102	114
March.....	133	143	135	145	159	164	170	183	166	209	170	131	122	140	148	125	176	206	181	172	170	102
April.....	144	155	148	159	164	170	183	166	209	170	131	122	140	148	125	176	206	181	172	170	102	114
May.....	157	170	161	174	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	188
June.....	168	182	169	184	188	177	191	181	181	181	181	181	181	181	181	181	181	181	181	181	181	188
July.....	166	181	168	182	185	180	194	181	181	181	181	181	181	181	181	181	181	181	181	181	181	188
August.....	163	178	165	177	178	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	188
September.....	164	178	165	177	178	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	188
October.....	161	175	163	174	178	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	188
November.....	159	173	161	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	188
December.....	159	173	161	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	172	188
1919: Av. for year.	164	174	164	169	167	181	201	205	213	234	193	182	177	184	184	184	184	184	184	184	184	188
January.....	162	175	165	175	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	188
February.....	162	174	165	174	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	181	188
March.....	165	177	169	178	183	184	187	197	210	210	210	210	210	210	210	210	210	210	210	210	210	186
April.....	172	182	175	184	187	197	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	186
May.....	175	187	181	191	197	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	185
June.....	170	183	169	173	168	220	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	185
July.....	171	183	169	173	168	220	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	185
August.....	166	177	168	168	160	223	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	185
September.....	161	170	158	158	150	219	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	189
October.....	157	165	155	153	145	211	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	189
November.....	155	162	151	151	143	211	196	196	196	196	196	196	196	196	196	196	196	196	196	196	196	189
December.....	154	161	153	152	143	211	196	196	196	196	196	196	196	196	196	196	196	196	196			

The curve shown in the chart on page 39 pictures more readily to the eye the changes in the cost of the family market basket and the trend in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale¹ because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

Retail Prices of Food in 50 Cities on Specified Dates.

AVERAGE retail food prices are shown in Table 7 for 19 cities for December 15, 1919, and for January 15 of each year, 1913, 1914, 1918, 1919, and 1920. These cities are as follows:

Atlanta, Ga.	Denver, Colo.	Pittsburgh, Pa.
Baltimore, Md.	Detroit, Mich.	St. Louis, Mo.
Birmingham, Ala.	Los Angeles, Calif.	San Francisco, Calif.
Boston, Mass.	Milwaukee, Wis.	Seattle, Wash.
Buffalo, N. Y.	New Orleans, La.	Washington, D. C.
Chicago, Ill.	New York, N. Y.	
Cleveland, Ohio.	Philadelphia, Pa.	

In Table 8, average prices are shown for December, 1919, and January, 1920, for 31 other cities as follows:

Bridgeport, Conn.	Little Rock, Ark.	Portland, Me.
Butte, Mont.	Louisville, Ky.	Portland, Oreg.
Charleston, S. C.	Manchester, N. H.	Providence, R. I.
Cincinnati, Ohio.	Memphis, Tenn.	Richmond, Va.
Columbus, Ohio.	Minneapolis, Minn.	Rochester, N. Y.
Dallas, Tex.	Mobile, Ala.	St. Paul, Minn.
Fall River, Mass.	Newark, N. J.	Salt Lake City, Utah.
Houston, Tex.	New Haven, Conn.	Scranton, Pa.
Indianapolis, Ind.	Norfolk, Va.	Springfield, Ill.
Jacksonville, Fla.	Omaha, Nebr.	
Kansas City, Mo.	Peoria, Ill.	

¹ For discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts," by Lucien W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, The "Ratio" chart, by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pages.

TREND IN RETAIL PRICES OF 22 FOOD ARTICLES, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO JANUARY, 1920.

[Average for 1913=100.]

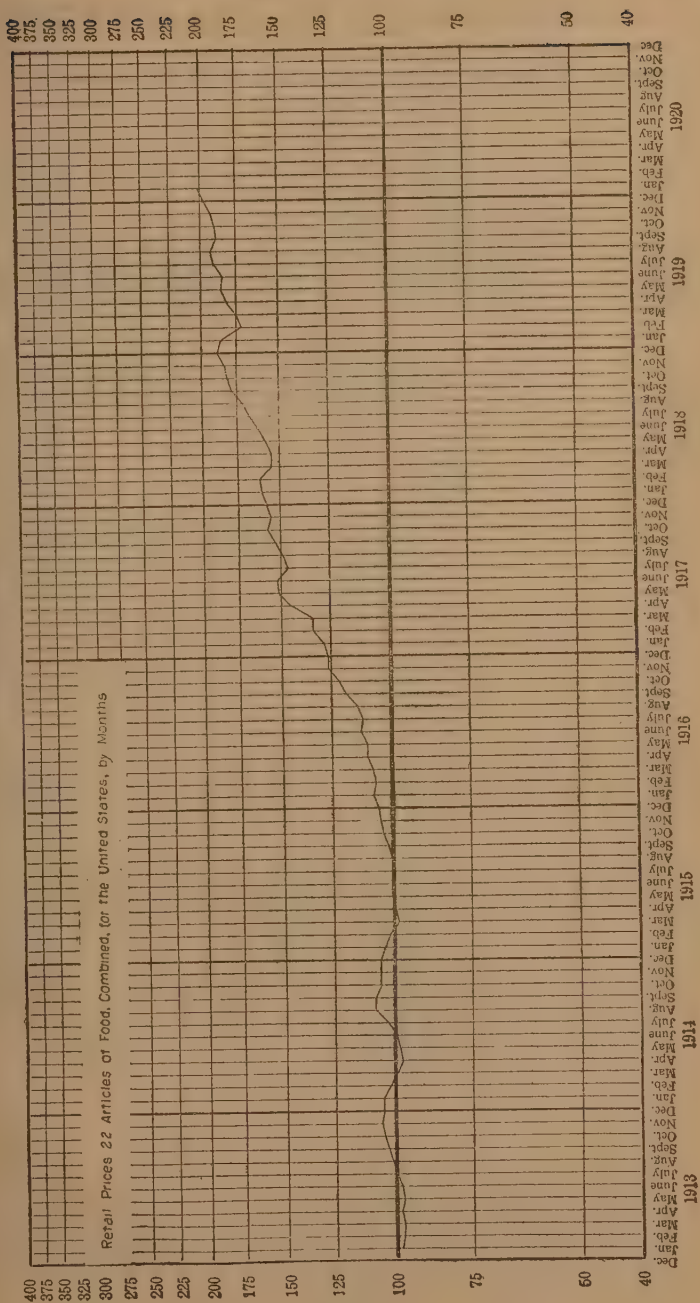


TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF
[The prices shown in Tables 7 and 8 are computed from reports sent monthly to the Bureau by retail

Article.	Unit.	Atlanta, Ga.						Baltimore, Md.					
		Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.
		1913	1914	1918	1919			1913	1914	1918	1919		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	23.0	23.6	30.0	39.2	37.4	37.4	20.7	22.8	32.7	44.5	38.9	39.4
Round steak.....	Lb.	20.5	20.7	28.8	36.9	34.7	35.4	19.0	21.6	31.5	43.6	36.8	37.4
Rib roast.....	Lb.	17.5	19.0	23.1	30.9	27.3	29.0	17.0	17.8	26.7	35.6	31.6	32.3
Chuck roast.....	Lb.	13.5	15.3	20.2	25.9	21.5	24.0	15.0	15.2	23.1	30.8	21.8	25.5
Plate beef.....	Lb.	9.8	9.5	16.0	20.5	16.1	18.9	10.8	12.8	18.3	25.1	17.0	17.8
Tork chops.....	Lb.	21.0	22.1	34.6	39.4	37.9	37.1	18.0	17.5	31.8	41.0	33.5	34.6
Bacon.....	Lb.	32.0	30.4	50.6	63.9	55.3	53.5	21.3	22.3	45.0	54.3	42.4	41.1
Ham.....	Lb.	28.5	30.0	44.4	56.0	52.1	50.8	29.0	29.0	49.1	58.7	50.8	52.2
Lamb.....	Lb.	20.0	20.1	31.0	35.6	31.4	39.5	17.3	18.0	32.7	38.5	32.8	36.9
Veals.....	Lb.	19.5	20.9	30.9	39.6	37.9	39.5	20.0	21.3	35.1	42.0	39.5	41.0
Salmon (canned).....	Lb.	.....	.....	22.8	28.5	28.8	30.2	.....	.....	26.2	28.9	34.2	35.2
Milk, fresh.....	Qt.	10.0	10.6	17.5	21.7	25.0	25.0	8.8	8.7	13.0	17.0	16.0	16.0
Milk, evaporated (unsweetened).....	(^c)	.....	.....	.....	16.6	18.1	18.8	.....	.....	.....	16.7	16.4	16.6
Butter.....	Lb.	42.9	40.4	58.1	74.8	78.5	77.6	42.8	40.6	59.1	77.4	81.2	79.2
Oleomargarine.....	Lb.	.....	.....	.....	41.5	47.5	46.4	.....	.....	.....	38.6	41.0	40.8
Nut margarine.....	Lb.	.....	.....	.....	40.1	40.7	38.0	.....	.....	.....	36.6	35.9	35.1
Cheese.....	Lb.	25.0	25.0	34.7	47.3	42.8	42.5	23.3	23.3	35.5	47.3	43.2	43.8
Lard.....	Lb.	14.8	15.5	34.4	34.9	34.4	34.2	14.0	14.7	33.2	33.0	32.2	32.3
Crisco.....	Lb.	.....	.....	.....	36.3	34.3	37.1	.....	.....	.....	32.4	35.1	35.7
Eggs, strictly fresh.....	Doz.	30.6	39.3	67.5	70.2	91.4	76.7	33.8	38.8	74.1	73.8	87.8	84.4
Eggs, storage.....	Doz.	25.0	35.0	59.0	59.3	63.1	55.7	25.0	34.0	54.1	60.7	61.9	61.9
Bread.....	Lb. ³	6.0	5.6	10.0	10.0	10.0	10.0	5.4	5.5	8.7	9.7	9.6	9.6
Flour.....	Lb.	3.6	3.4	7.0	6.9	7.3	7.5	3.2	3.1	6.6	6.8	8.0	8.4
Corn meal.....	Lb.	2.4	2.7	5.0	5.8	5.6	5.5	2.6	2.5	6.1	5.9	5.5	5.5
Roll'd oats.....	Lb.	.....	.....	.....	10.9	10.6	10.8	.....	.....	.....	7.1	7.9	9.4
Corn flakes.....	(^a)	.....	.....	.....	14.2	14.1	14.1	.....	.....	.....	13.5	12.9	13.1
Cream of Wheat.....	(^b)	.....	.....	.....	25.8	27.9	27.8	.....	.....	.....	23.4	27.1	27.8
Macaroni.....	Lb.	.....	.....	.....	20.3	20.5	20.3	.....	.....	.....	17.3	18.3	18.7
Rice.....	Lb.	8.6	8.6	11.1	14.4	17.6	17.5	9.0	9.0	11.5	13.6	17.9	18.3
Beans, navy.....	Lb.	.....	.....	19.0	17.1	14.7	14.6	.....	.....	18.6	15.8	11.7	11.7
Potatoes.....	Lb.	2.0	2.3	3.9	4.2	4.8	6.0	1.7	1.8	3.6	3.4	3.6	4.5
Onions.....	Lb.	.....	.....	5.9	5.6	9.1	9.8	.....	.....	5.1	3.8	7.5	8.6
Cabbage.....	Lb.	.....	.....	.....	4.9	6.5	8.4	.....	.....	.....	4.1	5.6	9.1
Beans, baked.....	(^e)	.....	.....	.....	19.3	16.3	16.0	.....	.....	.....	17.3	15.5	15.5
Corn, canned.....	(^e)	.....	.....	.....	21.7	20.0	19.9	.....	.....	.....	20.4	17.8	18.4
Peas, canned.....	(^e)	.....	.....	.....	22.3	20.4	20.2	.....	.....	.....	18.7	18.2	18.8
Tomatoes, canned.....	(^e)	.....	.....	.....	16.0	14.5	14.6	.....	.....	.....	16.2	15.2	14.9
Sugar, granulated.....	Lb.	6.1	5.5	10.4	11.1	22.6	22.1	5.1	4.7	9.4	10.4	13.8	16.9
Tea.....	Lb.	60.0	60.0	79.3	89.9	87.6	86.9	56.0	56.0	65.3	73.2	71.6	72.4
Coffee.....	Lb.	32.0	32.0	29.7	34.0	51.0	51.6	25.2	24.8	27.7	33.8	45.8	44.9
Prunes.....	Lb.	.....	.....	16.7	18.5	24.8	25.3	.....	.....	16.6	19.4	30.1	28.7
Raisins.....	Lb.	.....	.....	17.1	18.2	22.8	22.9	.....	.....	15.3	17.8	23.8	24.1
Bananas.....	Doz.	.....	.....	.....	27.7	34.2	32.1	.....	.....	.....	30.0	32.2	33.6
Oranges.....	Doz.	.....	.....	.....	39.3	41.3	39.4	.....	.....	.....	46.2	52.2	41.5

¹ The steak for which prices are here reported is known as "porterhouse" in most of the cities included in this table, but in this city it is called sirloin steak.

FOOD FOR JAN. 15, 1913, 1914, 1918, 1919, 1920, AND DEC. 15, 1919, FOR 19 CITIES.

dealers. As some dealers occasionally fail to report, the number of quotations varies from month to month]

Birmingham, Ala.						Boston, Mass.						Buffalo, N. Y.						
Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	
1913	1914	1918	1919			1913	1914	1918	1919			1913	1914	1918	1919			
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.		
25.0	28.0	35.0	40.7	38.7	40.7	35.2	32.5	42.6	55.1	58.9	60.6	20.3	21.5	31.4	39.1	35.8	37.1	
19.6	23.0	30.5	37.7	36.8	38.0	32.0	33.8	42.7	55.3	53.9	56.7	18.3	19.2	29.2	36.8	32.6	33.6	
19.9	21.0	26.3	32.6	30.8	31.5	23.4	23.7	30.3	38.6	41.5	42.0	17.0	16.8	25.0	32.1	28.9	30.9	
15.1	16.5	21.9	28.3	25.5	25.5	16.3	17.3	25.3	30.4	29.7	30.2	14.7	15.5	22.3	28.6	24.2	25.6	
10.0	11.5	17.1	22.5	17.0	17.6							10.7	11.8	17.5	23.1	17.3	18.2	
19.4	22.9	33.5	40.2	39.8	36.6	20.0	22.8	35.0	41.0	39.0	38.3	18.0	19.5	35.4	41.4	36.8	37.3	
31.3	34.0	52.0	62.4	57.3	57.1	24.4	25.0	45.9	53.0	46.3	47.8	20.3	21.0	44.3	52.9	40.4	41.2	
30.0	32.0	45.0	53.5	52.3	51.5	28.3	31.4	46.5	58.1	53.3	55.1	24.0	25.0	45.1	53.1	50.2	50.6	
20.0	22.0	35.0	38.0	38.5	38.5	21.3	21.2	33.4	40.2	37.6	40.7	17.5	16.7	29.1	32.9	26.8	31.6	
18.7	19.3	30.1	36.9	36.1	37.0	22.0	24.5	34.9	43.3	45.1	45.8	19.0	20.0	32.8	41.5	38.2	42.0	
		27.2	31.8	39.5	39.3			30.2	32.3	35.1	36.0			28.6	28.9	34.3	35.0	
10.3	10.0	15.2	20.0	25.0	25.0	8.9	8.9	14.5	16.5	17.0	17.0	8.0	8.0	14.0	16.0	16.0	16.0	
			15.1	17.5	17.8				16.9	17.1	17.0				16.8	16.5	16.4	
44.0	43.0	59.5	77.2	82.1	78.1	38.5	38.2	54.4	71.1	72.9	73.3	40.2	39.8	57.0	75.5	78.2	73.7	
			42.0	45.8	45.1				38.9	42.8	44.3				39.0	42.9	42.8	
			40.3	38.3	38.4				36.6	35.8	35.7				33.7	34.4	34.4	
23.0	22.5	35.6	47.8	42.3	42.6	23.1	24.0	33.2	39.3	42.8	42.9	21.5	21.5	33.6	42.4	41.7	41.9	
15.3	15.9	32.7	37.1	35.0	33.5	15.4	15.8	33.4	33.3	34.8	33.5	14.1	14.3	31.9	31.5	32.7	31.2	
			33.7	37.3	37.5				33.6	36.0	36.6				31.6	35.8	35.6	
33.8	38.8	68.3	74.3	89.1	75.0	41.0	47.3	79.1	90.2	108.6	103.3	37.7	43.5	71.8	75.5	95.3	88.0	
25.0	30.0	57.9	69.5	64.2	61.5	26.4	36.3	54.1	58.8	65.1	64.7	23.3	34.0	52.6	64.8	60.4	60.3	
6.4	5.6	10.0	11.7	9.6	9.6	5.9	5.9	8.7	9.1	9.6	11.0	5.6	5.2	9.3	9.7	10.0	10.0	
3.8	3.8	6.7	7.2	7.6	7.8	3.7	3.6	7.4	6.8	8.4	8.8	2.9	2.9	6.2	6.2	7.4	7.7	
2.1	2.6	5.1	5.3	5.3	5.3	3.5	3.6	7.7	6.8	7.4	7.2	2.5	2.7	7.7	5.8	6.6	6.4	
			10.8	11.1	11.7				7.3	7.9	8.0				6.8	7.8	8.1	
			14.8	14.8	14.7				13.8	13.9	14.0					13.2	13.0	13.0
			25.2	26.8	28.8				24.2	27.4	28.8					24.5	25.4	26.6
			21.1	20.9	20.8				22.4	22.1	22.7					20.5	20.3	20.8
8.2	7.9	12.5	13.4	17.7	18.3	9.2	9.4	12.0	14.0	18.1	18.5	9.3	9.3	11.9	13.7	17.5	17.8	
		19.2	17.4	14.2	13.6			18.8	15.4	11.4	11.3			19.3	13.8	11.5	11.5	
1.9	2.3	3.9	4.3	5.1	6.2	1.7	2.0	3.7	3.3	3.9	4.8	1.4	1.8	3.1	2.7	3.9	5.0	
		6.0	4.6	9.1	10.0			5.7	3.8	9.2	9.5			5.4	3.6	7.8	9.0	
			4.7	6.5	8.6				4.1	6.7	8.7				3.0	5.5	7.4	
			20.5	18.1	18.9				20.1	17.1	17.2				16.7	14.1	14.1	
			20.6	19.2	18.8				21.2	20.5	20.6				20.5	18.7	18.4	
			20.6	21.6	21.3				21.1	20.4	21.7				18.3	17.9	17.8	
			16.6	14.3	14.2				20.3	15.3	16.3				17.9	16.5	15.4	
5.7	5.3	9.6	10.9	21.4	21.3	5.8	5.2	9.9	10.7	11.0	14.4	5.5	5.1	9.7	10.7	11.2	10.4	
61.3	61.3	76.2	83.7	86.2	87.3	58.6	58.6	61.7	66.0	66.7	66.3	45.0	45.0	55.5	63.9	66.4	67.0	
28.8	28.3	32.8	36.8	49.8	49.6	33.0	33.0	34.6	38.9	53.3	53.0	29.2	29.3	30.0	34.4	47.0	47.0	
		14.8	18.4	30.4	29.7			16.7	20.5	28.8	28.0			16.9	20.7	30.4	29.9	
		15.3	18.2	22.7	22.3			14.8	15.9	23.5	24.8			14.0	14.7	20.8	23.2	
			39.1	42.4	44.5				33.8	45.0	51.4				40.0	42.3	43.4	
			44.8	42.6	42.8				52.6	55.9	58.0				56.2	57.9	57.5	

2 15-16-ounce can.

* Baked weight.

4 8-ounce package.

5 25-ounce package.

* No. 2 can.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

Article.	Unit.	Chicago, Ill.						Cleveland, Ohio.					
		Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.
		1913	1914	1918	1919			1913	1914	1918	1919		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	21.0	21.8	30.2	37.5	35.9	37.2	22.3	24.7	30.2	37.8	37.7	38.4
Round steak.....	Lb.	18.2	21.2	27.3	34.0	31.7	32.0	18.8	22.0	28.8	35.5	34.3	34.6
Rib roast.....	Lb.	18.2	19.6	25.4	31.1	29.0	30.1	17.8	19.1	24.4	29.6	29.0	29.5
Chuck roast.....	Lb.	11.3	15.8	21.2	27.5	23.5	24.3	14.7	16.4	22.4	27.6	24.2	25.4
Plate beef.....	Lb.	10.9	11.9	16.4	20.7	16.7	17.6	10.4	12.0	16.8	20.7	16.9	18.2
Pork chops.....	Lb.	16.0	17.9	31.6	35.2	33.3	32.4	17.5	19.9	33.1	39.5	37.1	36.8
Bacon.....	Lb.	31.3	31.0	49.8	61.6	52.7	53.1	23.9	27.4	47.0	58.7	47.8	49.7
Ham.....	Lb.	30.8	32.0	42.8	55.3	51.4	51.8	32.0	33.5	45.6	57.6	53.4	56.2
Lamb.....	Lb.	18.7	19.7	30.6	34.2	32.3	37.0	17.3	19.1	30.1	33.6	33.0	36.9
Hens.....	Lb.	17.4	17.8	30.4	33.5	32.0	37.6	19.3	20.6	33.8	39.1	37.3	42.8
Salmon (canned).....	Lb.			30.3	31.6	37.1	36.0			28.2	30.6	36.5	37.5
Milk, fresh.....	Qt.	8.0	8.0	11.9	14.0	15.1	15.0	8.8	8.0	13.0	15.0	16.0	16.0
Milk, evaporated (unsweetened).....	(1)				16.0	16.2	16.1				16.0	17.2	17.4
Butter.....	Lb.	39.9	38.1	54.4	71.3	74.4	69.0	41.8	42.8	57.1	76.0	80.4	74.8
Oleomargarine.....	Lb.				37.4	41.7	41.6				39.7	16.1	45.8
Nut margarine.....	Lb.				34.6	33.7	33.3				35.2	35.5	35.4
Cheese.....	Lb.	25.0	25.3	37.5	43.9	45.0	44.9	23.0	23.5	33.8	42.6	42.4	43.3
Lard.....	Lb.	14.8	15.0	31.8	31.4	33.4	31.5	15.8	16.3	31.6	32.7	34.4	34.0
Crisco.....	Lb.				33.1	36.2	35.4				32.7	37.8	37.9
Eggs, strictly fresh.....	Doz.	32.7	38.8	65.1	69.5	82.1	77.8	35.0	44.8	72.5	77.9	98.0	92.3
Eggs, storage.....	Doz.	23.8	33.5	53.4	56.4	60.2	60.5	24.5	36.0	62.4	60.2	63.1	66.1
Bread.....	Lb. ²	6.1	6.1	9.2	10.2	10.7	10.7	5.5	5.6	9.0	10.0	9.6	10.9
Flour.....	Lb.	2.8	2.9	6.1	6.1	7.7	7.9	3.2	3.2	6.8	6.7	7.8	8.2
Corn meal.....	Lb.	2.9	3.0	7.0	5.8	6.6	6.6	2.8	2.9	7.2	6.2	6.3	6.3
Rollod oats.....	Lb.				7.3	7.3	8.3				7.9	9.4	10.3
Corn flakes.....	(3)				12.7	13.3	13.0				13.9	14.1	14.6
Cream of Wheat.....	(4)				24.2	25.7	27.4				24.7	27.9	28.9
Macaroni.....	Lb.				19.1	18.3	18.8				18.9	19.0	19.1
Rice.....	Lb.	9.0	9.0	12.0	13.7	17.4	17.6	8.5	9.0	11.9	14.4	18.6	18.7
Beans, navy.....	Lb.			18.5	14.1	12.1	11.8			18.1	13.9	11.4	11.6
Potatoes.....	Lb.	1.3	1.7	2.8	2.7	4.1	5.2	1.4	2.0	3.0	3.1	4.2	5.3
Onions.....	Lb.			4.5	3.5	7.6	8.3			4.8	3.4	7.6	9.0
Cabbage.....	Lb.				3.7	6.6	8.1				3.6	6.1	9.1
Beans, baked.....	(6)				17.3	16.5	16.6				18.2	15.9	15.8
Corn, canned.....	(6)				18.0	17.0	17.2				20.5	19.3	19.4
Peas, canned.....	(5)				17.0	17.1	17.1				19.4	19.1	19.8
Tomatoes, canned.....	(5)				17.0	16.0	15.3				17.7	16.3	16.0
Sugar, granulated.....	Lb.	5.3	5.0	8.4	10.4	17.1	19.8	5.6	5.1	9.6	10.9	14.1	18.9
Tea.....	Lb.	53.3	53.3	59.3	64.0	67.1	64.5	50.0	50.0	59.9	64.8	74.0	74.0
Coffee.....	Lb.	30.0	30.0	28.3	32.7	45.0	44.7	26.5	26.5	28.9	34.8	50.2	51.1
Prunes.....	Lb.			16.2	20.0	30.0	29.6			17.1	20.2	29.2	29.1
Raisins.....	Lb.			15.0	15.9	26.2	25.4			14.0	15.7	23.8	25.6
Bananas.....	Doz.				35.5	37.7	37.5				41.4	47.5	48.5
Oranges.....	Doz.				49.3	50.5	51.6				58.7	50.5	53.8

¹ 15-16 ounce package.² Baked weight.³ 8-ounce package.

FOR JAN. 15, 1913, 1914, 1918, 1919, 1920, AND DEC. 15, 1919, FOR 19 CITIES—Continued.

Denver, Colo.					Detroit, Mich.								Los Angeles, Calif.							
Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.			
1913	1914	1918	1919			1913	1914	1918	1919			1913	1914	1918	1919					
<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>				
22.0	22.9	20.2	36.9	31.8	34.3	22.8	26.2	31.8	37.6	36.7	38.2	22.2	23.1	26.4	33.9	31.5				
19.0	20.7	27.6	34.0	28.8	30.4	18.0	21.4	28.5	34.1	31.8	32.7	20.0	21.0	24.4	31.6	29.5				
13.9	16.7	22.5	28.6	25.3	25.8	18.0	20.2	25.1	29.7	29.2	30.6	17.4	19.4	23.2	30.2	26.5				
14.0	15.3	20.3	25.2	20.7	21.8	14.5	15.6	21.0	25.7	22.0	24.0	14.7	16.6	19.2	25.0	20.5				
9.1	9.7	14.8	19.1	13.9	15.0	10.6	11.7	16.7	20.0	15.9	17.4	11.8	13.5	15.7	20.7	16.4				
17.5	18.6	33.3	40.0	36.0	34.7	16.5	17.6	33.3	37.9	36.4	37.3	24.4	25.6	37.3	45.7	46.6				
26.3	27.4	51.8	61.3	52.2	52.3	21.0	22.8	45.8	55.8	47.0	48.1	33.8	33.5	53.3	67.0	58.8				
27.0	28.3	46.7	59.3	54.8	54.0	23.5	28.0	42.3	57.5	53.3	52.5	35.0	34.1	52.3	62.9	59.4				
15.0	15.1	28.9	30.4	28.3	30.4	16.0	16.6	31.3	35.2	34.4	39.1	17.4	19.1	31.1	34.4	31.6				
20.4	19.7	30.5	35.8	35.0	38.0	18.8	19.4	34.2	38.9	36.7	41.1	26.8	27.4	36.0	46.3	48.2				
8.4	8.4	11.5	12.6	13.0	13.0	9.0	8.9	14.0	15.0	16.0	16.0	10.0	10.0	14.0	14.0	16.0				
40.0	39.4	54.3	73.3	77.2	68.5	39.7	30.9	55.6	74.4	79.4	73.7	44.5	38.5	57.4	73.0	75.2				
39.2	39.2	73.3	95.8	45.1	43.3	39.2	39.2	39.8	39.8	43.7	44.4	44.4	44.4	44.4	41.9	45.5				
26.1	26.1	35.8	41.6	45.0	45.1	21.3	22.0	33.8	44.4	43.4	43.7	19.5	20.0	33.3	33.2	36.0				
15.6	16.3	34.2	34.2	37.9	36.8	15.6	16.1	32.9	33.4	34.9	33.9	18.0	18.0	33.2	34.3	35.2				
37.0	43.6	61.2	74.8	73.1	35.0	48.2	72.6	75.1	75.1	94.0	92.5	41.0	40.6	62.1	67.1	79.8				
25.0	33.5	50.9	58.8	64.7	62.3	25.2	36.5	52.8	61.3	62.4	63.8	30.0	41.7	49.3	59.4	64.3				
5.4	5.4	10.0	11.9	11.0	11.5	5.6	5.6	8.7	9.5	10.9	11.1	6.2	6.1	8.9	8.9	10.0				
2.6	2.5	5.4	6.0	6.8	7.1	3.1	3.1	6.2	6.4	7.8	7.9	3.4	3.5	6.3	7.1	7.4				
2.5	2.6	5.9	5.6	6.1	6.2	2.8	3.0	7.7	6.5	6.7	6.9	3.3	3.5	7.5	6.9	7.5				
8.4	8.4	8.4	8.9	9.7	9.7	8.0	8.0	8.0	8.0	8.0	9.7	9.7	9.7	9.7	9.2	8.7				
14.8	14.8	14.8	14.8	14.8	14.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.7	13.1				
25.2	25.2	25.2	25.2	25.2	25.2	25.1	25.1	25.1	25.1	27.2	27.2	28.3	28.3	28.3	24.7	28.0				
19.9	19.9	19.9	19.9	19.9	19.9	19.2	19.2	19.2	19.2	19.9	19.5	19.5	19.5	19.5	18.4	17.2				
8.6	8.6	11.5	14.2	17.6	18.3	8.4	8.4	11.8	13.7	13.4	13.3	7.7	8.0	11.0	13.7	17.0				
17.7	17.7	14.7	13.1	13.3	13.3	17.9	13.5	11.4	11.4	11.4	11.4	16.7	16.7	16.7	14.1	10.2				
1.2	1.7	2.2	2.7	4.4	5.0	1.3	1.6	2.9	2.6	4.0	5.3	1.1	1.9	2.5	3.1	5.2				
4.7	4.7	4.1	7.8	8.0	8.0	5.3	5.3	4.0	4.0	8.2	8.7	3.7	3.7	3.7	3.7	7.0				
3.7	3.7	6.8	78.5	78.5	78.5	4.5	4.5	7.2	7.2	8.7	8.7	8.7	8.7	8.7	2.7	4.8				
20.1	20.1	17.6	18.1	18.1	18.1	18.3	18.3	16.2	15.9	16.2	15.9	19.6	19.6	19.6	19.6	17.9				
18.7	18.7	18.4	18.4	18.4	18.4	19.7	19.7	19.5	19.5	19.5	19.0	19.2	19.2	19.2	19.2	18.5				
19.5	19.5	19.5	19.5	19.5	19.5	17.9	17.9	18.6	18.6	14.0	14.0	19.9	19.9	19.9	19.9	19.0				
15.7	15.7	15.0	15.0	15.0	15.0	17.5	17.5	16.6	16.9	16.9	16.9	17.2	17.2	17.2	17.2	13.9				
5.8	5.0	8.9	11.6	13.2	13.3	5.2	5.0	8.7	10.8	14.6	15.2	5.9	5.2	8.7	10.6	13.9				
52.8	52.8	57.5	65.6	70.6	69.8	43.3	43.3	54.4	63.6	66.6	63.6	54.5	54.5	58.6	68.8	69.8				
29.4	29.4	30.0	35.8	50.1	49.7	29.3	30.0	29.8	35.0	48.9	48.8	36.3	36.3	31.2	34.5	45.4				
16.6	20.5	29.9	30.9	30.9	30.9	16.8	20.3	30.4	30.8	30.4	30.8	14.6	14.6	20.3	27.2	27.6				
14.7	16.8	23.7	25.1	25.1	25.1	13.8	15.9	23.8	24.4	24.4	24.4	13.8	13.8	16.7	22.3	24.4				
43.2	43.2	43.8	42.8	43.8	43.8	30.1	30.1	34.0	35.4	35.4	35.4	38.1	38.1	42.0	38.1	42.0				
55.4	55.4	53.4	53.4	53.4	53.4	53.8	53.8	53.8	53.8	53.8	54.0	39.3	39.3	46.9	39.3	41.3				

* 28-ounce package.

* No. 2 can.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

Article.	Unit.	Milwaukee, Wis.						New Orleans, La.					
		Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.
		1913	1914	1918	1919			1913	1914	1918	1919		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....	Lb.	20.5	23.4	29.8	36.2	35.0	36.6	19.6	22.1	28.1	35.2	31.6	33.6
Round steak.....	Lb.	18.5	21.6	28.4	34.5	32.8	33.5	17.1	19.3	25.3	31.9	29.1	30.9
Rib roast.....	Lb.	17.3	18.8	24.5	29.9	28.2	29.7	18.3	19.9	24.5	29.4	28.7	29.2
Chuck roast.....	Lb.	15.0	16.4	22.5	27.6	24.8	26.1	12.1	14.9	18.3	25.3	21.4	22.8
Plate beef.....	Lb.	10.5	11.7	16.7	20.8	17.4	18.0	10.9	11.6	16.8	21.6	19.5	19.7
Perk chops.....	Lb.	15.3	17.8	32.1	36.6	33.0	33.3	20.0	22.9	35.0	43.6	42.7	42.5
Bacon.....	Lb.	25.5	27.4	48.9	57.7	50.2	52.0	29.8	29.9	51.9	63.3	52.0	51.4
Ham.....	Lb.	26.0	27.8	45.1	53.7	50.5	50.8	26.3	26.0	43.8	51.8	48.5	49.5
Lamb.....	Lb.	18.5	19.0	31.2	36.4	32.7	37.3	19.8	22.1	29.8	39.4	38.2	38.7
Hens.....	Lb.	17.8	19.0	30.4	35.0	31.6	38.1	20.8	21.6	33.0	41.5	41.9	42.6
Salmon (canned).....	Lb.	.....	.....	27.8	31.0	35.3	37.3	.....	.....	31.3	36.6	37.0	38.2
Milk, fresh.....	Qt.	7.0	7.0	11.0	13.0	13.0	13.0	10.0	9.7	14.2	16.3	18.5	18.5
Milk, evaporated (unsweetened).....	(2)	.....	.....	.....	16.2	17.0	17.3	.....	.....	.....	15.8	16.6	16.7
Butter.....	Lb.	38.0	38.5	54.4	74.0	77.2	70.0	41.1	40.1	56.8	76.3	80.7	77.1
Oleomargarine.....	Lb.	.....	.....	.....	38.8	43.1	43.0	.....	.....	.....	40.2	45.9	45.6
Nut margarine.....	Lb.	.....	.....	.....	34.7	33.8	34.1	.....	.....	.....	36.4	36.1	38.1
Cheese.....	Lb.	22.3	22.3	33.5	46.1	41.6	41.6	22.0	22.8	34.8	46.4	43.2	43.2
Lard.....	Lb.	15.0	15.6	31.9	34.0	34.7	33.0	14.4	15.0	33.1	33.7	35.9	35.1
Crisco.....	Lb.	.....	.....	.....	33.1	37.1	36.7	.....	.....	.....	33.9	39.2	39.2
Eggs, strictly fresh.....	Doz.	34.6	38.2	63.0	70.8	87.2	79.6	35.6	38.0	58.6	72.1	80.9	77.1
Eggs, storage.....	Doz.	25.3	33.3	49.1	52.6	60.3	59.1	25.0	30.0	49.2	59.3	64.0	63.5
Bread.....	Lb.	5.6	5.7	8.8	8.6	10.0	10.5	.....	5.0	9.1	9.2	9.1	9.8
Flour.....	Lb.	3.1	3.1	6.2	6.4	8.0	8.3	3.7	3.7	7.2	7.4	7.6	8.1
Corn meal.....	Lb.	3.3	3.3	7.1	6.5	6.5	6.5	2.6	2.6	6.3	5.4	5.5	5.4
Rolled oats.....	Lb.	.....	.....	.....	7.9	8.2	8.3	.....	.....	.....	7.5	9.0	9.6
Corn flakes.....	(4)	.....	.....	.....	14.3	14.2	14.1	.....	.....	.....	14.2	14.5	14.1
Cream of Wheat.....	(5)	.....	.....	.....	24.8	28.2	28.8	.....	.....	.....	24.8	27.4	28.8
Macaroni.....	Lb.	.....	.....	.....	19.9	18.8	19.1	.....	.....	.....	11.7	12.0	11.7
Rice.....	Lb.	9.0	9.0	11.8	14.3	18.0	18.5	7.4	7.5	10.6	12.0	15.4	16.0
Beans, navy.....	Lb.	.....	.....	19.0	14.0	11.0	11.1	.....	.....	17.6	14.5	11.7	11.2
Potatoes.....	Lb.	1.2	1.6	2.7	2.8	4.2	5.1	2.0	2.3	3.8	4.0	5.1	6.6
Onions.....	Lb.	.....	.....	4.8	3.8	8.1	8.6	.....	.....	4.7	4.1	8.2	9.1
Cabbage.....	Lb.	.....	.....	.....	3.8	7.0	8.2	.....	.....	.....	3.0	4.3	6.0
Beans, baked.....	(6)	.....	.....	.....	18.5	15.9	15.6	.....	.....	.....	18.9	17.1	17.0
Corn, canned.....	(6)	.....	.....	.....	17.6	17.8	17.3	.....	.....	.....	18.8	18.0	17.1
Peas, canned.....	(6)	.....	.....	.....	17.1	17.4	16.7	.....	.....	.....	18.6	18.6	18.6
Tomatoes, canned.....	(6)	.....	.....	.....	17.5	16.6	15.0	.....	.....	.....	15.3	15.4	15.0
Sugar, granulated.....	Lb.	5.5	5.3	8.6	10.9	14.4	17.5	5.7	4.9	9.6	10.5	12.2	19.3
Tea.....	Lb.	50.0	50.0	59.5	67.0	68.0	69.8	62.1	62.1	62.6	64.5	70.7	75.5
Coffee.....	Lb.	27.5	27.5	26.1	32.1	47.6	47.2	27.1	25.7	26.6	32.4	42.2	42.2
Prunes.....	Lb.	.....	.....	15.8	19.6	28.8	29.0	.....	.....	15.9	19.0	30.5	29.9
Raisins.....	Lb.	.....	.....	15.1	15.6	25.1	25.6	.....	.....	15.1	17.1	23.6	25.4
Bananas.....	Doz.	.....	.....	.....	35.0	40.0	41.6	.....	.....	.....	20.0	25.0	25.0
Oranges.....	Doz.	.....	.....	.....	52.9	58.9	55.3	.....	.....	.....	43.8	45.8	41.4

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in his table, but in this city it is called "sirloin steak."

FOR JAN. 15, 1913, 1914, 1918, 1919, 1920, AND DEC. 15, 1919, FOR 19 CITIES—Continued.

New York, N. Y.						Philadelphia, Pa.						Pittsburgh, Pa.					
Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.
1913	1914	1918	1919			1913	1914	1918	1919			1913	1914	1918	1919		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
24.4	25.6	34.4	44.8	42.7	43.3	28.3	30.0	38.7	50.4	49.1	49.8	24.8	27.2	36.0	47.3	43.6	45.0
23.1	25.1	35.2	47.3	44.5	44.6	23.1	25.7	36.0	47.4	44.9	45.2	21.4	22.8	33.2	44.0	39.3	39.8
21.0	21.8	29.4	40.9	37.8	38.4	21.4	21.9	29.6	38.2	38.5	37.9	20.4	21.3	27.2	36.7	34.3	34.1
14.9	16.1	23.6	32.7	27.6	28.5	16.5	18.0	25.3	32.7	29.4	28.8	15.4	17.0	23.9	31.9	27.4	27.8
13.7	14.7	22.1	28.0	24.8	25.2	10.5	11.7	18.3	22.2	17.7	18.3	10.8	12.8	17.5	23.2	17.5	18.3
19.5	21.6	34.8	43.5	41.0	39.9	19.8	21.7	37.2	42.9	39.5	39.1	19.4	21.5	35.6	43.6	38.8	37.6
23.0	25.1	46.2	54.8	47.7	47.8	23.6	25.4	46.8	58.2	49.4	48.6	27.2	28.3	50.5	61.7	53.6	52.6
27.8	29.0	32.8	57.1	56.0	56.0	29.1	29.6	48.8	58.3	56.1	55.5	29.0	29.1	47.0	59.6	57.0	58.3
15.9	15.9	28.1	33.6	28.8	30.8	17.7	19.0	31.4	38.9	39.2	40.9	21.3	20.7	34.5	39.6	37.7	41.3
19.8	21.3	32.6	40.8	40.1	40.3	20.8	22.9	33.8	43.1	44.5	44.3	24.3	25.8	38.8	46.3	43.1	46.9
.....	.....	35.5	37.0	41.9	41.9	.....	.....	26.6	30.0	34.0	34.4	.....	.....	30.5	31.0	36.8	38.0
9.0	9.0	15.0	16.0	18.0	18.0	8.0	8.0	13.5	14.0	14.0	14.0	8.8	9.2	13.7	15.0	16.0	16.0
.....	.....	.....	16.1	16.1	16.0	.....	.....	.....	16.0	16.5	16.3	.....	.....	.....	15.8	16.7	16.6
40.8	39.8	57.4	75.5	80.6	75.2	46.4	46.1	62.4	80.4	88.3	82.4	41.9	42.3	58.6	78.0	81.8	77.2
.....	.....	.....	37.2	41.6	43.9	.....	.....	.....	41.1	45.2	45.9	.....	.....	.....	40.3	43.5	42.8
.....	.....	.....	34.3	34.5	34.7	.....	.....	.....	36.4	37.5	38.9	.....	.....	.....	36.9	35.6	35.5
20.0	19.8	34.4	42.7	43.1	43.3	25.0	25.0	36.2	44.6	46.4	46.0	24.5	24.5	35.2	44.3	43.7	44.0
15.9	15.9	33.0	33.1	34.3	33.8	14.4	15.1	33.6	33.3	33.5	32.4	15.6	15.6	33.4	33.6	35.0	34.0
.....	.....	.....	32.3	36.6	36.5	.....	.....	.....	32.3	35.3	34.9	.....	.....	.....	33.3	37.4	37.2
42.6	49.9	80.8	78.1	101.3	95.8	38.4	44.0	74.1	78.6	96.1	90.8	37.6	43.1	74.7	79.2	94.4	88.0
27.4	37.7	53.6	61.1	65.2	65.6	25.2	34.7	52.9	64.5	64.5	64.6	25.0	36.1	53.9	62.2	63.4	62.8
6.0	6.1	9.1	10.0	10.0	10.0	4.8	4.8	8.0	9.4	9.4	9.4	5.3	5.5	9.3	10.0	10.3	11.3
3.3	3.2	7.0	6.8	8.1	8.5	3.2	3.1	7.1	6.7	7.6	7.9	3.0	3.1	7.0	6.6	7.9	8.2
3.5	3.5	8.2	6.3	7.7	7.6	2.8	2.8	7.1	6.4	6.4	6.2	2.7	2.9	8.8	6.9	7.6	7.4
.....	.....	.....	7.4	8.1	8.2	.....	.....	.....	7.6	8.4	8.5	.....	.....	.....	9.0	9.0	10.3
.....	.....	.....	12.4	12.1	12.0	.....	.....	.....	12.8	12.3	12.5	.....	.....	.....	14.3	13.8	13.6
.....	.....	.....	24.0	26.0	27.6	.....	.....	.....	24.3	27.1	27.7	.....	.....	.....	25.5	27.6	28.5
.....	.....	.....	19.5	21.0	21.2	.....	.....	.....	19.8	22.0	20.6	.....	.....	.....	18.8	19.3	18.7
8.0	8.2	11.8	13.8	16.9	17.6	9.8	10.0	12.8	14.7	18.7	18.5	9.2	9.2	11.9	14.4	18.5	19.1
.....	.....	18.5	15.3	12.3	12.5	.....	.....	18.7	14.7	12.2	12.1	.....	.....	19.7	14.6	12.3	11.9
2.5	2.5	4.3	4.0	4.7	5.7	2.1	2.4	3.9	4.1	4.5	5.5	1.5	1.9	3.3	3.2	4.2	5.5
.....	.....	5.2	4.2	8.3	8.8	.....	.....	5.5	3.5	8.3	9.2	.....	.....	5.1	4.2	8.4	9.3
.....	.....	.....	3.9	5.5	7.5	.....	.....	.....	4.3	6.8	9.9	.....	.....	.....	4.4	6.2	8.7
.....	.....	.....	17.7	15.2	15.1	.....	.....	.....	16.0	14.8	14.6	.....	.....	.....	13.8	16.1	16.1
.....	.....	.....	19.7	18.6	19.2	.....	.....	.....	20.1	18.0	17.7	.....	.....	.....	19.7	18.8	18.4
.....	.....	.....	.....	18.5	18.2	.....	.....	.....	19.1	18.9	18.1	.....	.....	.....	19.5	18.9	18.3
.....	.....	.....	16.1	16.2	15.9	.....	.....	.....	15.0	15.6	15.5	.....	.....	.....	16.9	15.3	14.8
5.1	4.7	9.7	10.1	11.9	17.3	5.2	4.4	9.6	10.1	11.0	17.3	6.0	5.4	9.9	10.9	12.6	17.1
43.3	43.3	54.1	53.5	57.1	56.7	54.0	54.0	57.6	62.6	64.0	63.4	58.0	60.0	72.7	79.3	81.9	80.1
27.5	26.3	26.7	32.4	45.1	46.9	25.0	25.0	27.2	32.7	45.1	44.3	30.0	29.3	30.2	34.9	49.6	48.9
.....	.....	16.8	22.1	29.6	29.6	.....	.....	16.5	21.3	29.6	28.5	.....	.....	17.2	22.0	31.7	30.7
.....	.....	15.1	15.3	23.4	24.4	.....	.....	14.0	15.1	22.6	23.0	.....	.....	14.6	16.0	25.4	26.7
.....	.....	.....	32.0	37.7	41.7	.....	.....	.....	32.8	41.4	41.5	.....	.....	.....	40.8	45.0	46.0
.....	.....	.....	51.2	56.0	57.9	.....	.....	.....	51.1	52.5	47.4	.....	.....	.....	56.3	50.5	52.1

* 15-16 ounce can.
* Baked weight.

* 8-ounce package.
* 28-ounce package.

* No. 2 can.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD

Article.	Unit.	St. Louis, Mo.						San Francisco, Calif.					
		Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.
		1913	1914	1918	1919			1913	1914	1918	1919		
Sirloin steak.....	Lb.	Cts. 22.7	Cts. 27.3	Cts. 30.0	Cts. 37.0	Cts. 34.8	Cts. 35.7	Cts. 20.3	Cts. 21.0	Cts. 24.3	Cts. 32.8	Cts. 30.1	Cts. 32.3
Round steak.....	Lb.	19.3	24.3	29.6	36.5	34.4	35.1	18.7	19.7	23.7	32.0	29.0	30.7
Rib roast.....	Lb.	16.8	20.5	25.7	29.7	28.4	29.4	20.3	22.0	23.5	30.9	29.3	31.4
Chuck roast.....	Lb.	13.3	15.9	21.5	24.6	20.8	22.9	15.0	15.5	17.3	23.8	21.1	22.5
Plate beef.....	Lb.	9.2	14.1	17.2	20.7	17.4	19.4	12.5	15.0	16.6	22.2	18.1	19.9
Pork chops.....	Lb.	17.7	18.5	30.3	35.1	31.8	32.6	21.8	25.0	36.1	43.4	44.7	44.9
Bacon.....	Lb.	23.0	25.0	50.0	54.6	46.1	46.1	32.8	34.0	53.5	62.2	59.2	59.6
Ham.....	Lb.	25.0	30.0	45.7	56.7	49.5	50.0	30.0	32.0	48.9	58.6	57.7	56.0
Lamb.....	Lb.	17.7	17.1	30.6	34.1	31.9	35.7	17.2	18.0	28.2	34.7	32.3	34.6
Hens.....	Lb.	17.8	17.5	30.1	34.7	31.7	37.8	24.2	23.8	37.5	48.9	49.7	50.1
Salmon (canned).....	Lb.			28.5	32.3	34.2	34.4			25.7	28.0	33.4	34.0
Milk, fresh.....	Qt.	8.0	8.8	13.0	14.0	16.0	16.0	10.0	10.0	12.1	14.0	15.3	15.8
Milk, evaporated (unsweetened).....	(1)				16.3	16.4	16.6				16.4	15.2	15.3
Butter.....	Lb.	40.7	39.8	58.1	76.8	81.7	76.7	41.4	36.1	60.2	72.3	75.5	70.9
Oleomargarine.....	Lb.				37.5	41.0	41.6				39.0	38.2	37.9
Nut margarine.....	Lb.				35.5	34.7	34.9				36.3	35.3	35.6
Cheese.....	Lb.	20.2	21.3	35.2	45.7	41.5	42.0	21.0	21.0	33.5	41.9	44.8	43.2
Lard.....	Lb.	13.1	13.0	28.6	28.9	28.3	28.4	17.6	17.4	33.6	33.7	37.4	36.9
Crisco.....	Lb.				33.3	35.5	35.5				34.8	39.2	38.8
Eggs, strictly fresh.....	Doz.	29.3	35.3	68.4	69.9	80.2	74.0	31.4	47.9	71.0	65.7	83.9	68.9
Eggs, storage.....	Doz.	25.0	30.0	52.5	57.9	59.5	58.4	22.5	41.3	48.8	57.0	64.4	57.3
Bread.....	Lb.	5.0	5.8		10.0	10.0	10.0	5.9	5.2		10.0	11.7	11.4
Flour.....	Lb.	3.1	2.8	6.1	6.3	7.3	7.5	3.3	3.4	6.2	7.0	7.3	7.8
Corn meal.....	Lb.	2.3	2.6	5.9	5.3	5.5	5.6	3.4	3.4	7.1	7.3	6.9	6.8
Rollod oats.....	Lb.				7.0	6.4	8.9				8.4	8.9	10.0
Corn flakes.....	(3)				14.2	13.2	13.2				14.2	11.0	14.1
Cream of Wheat.....	(4)				24.8	28.7	28.0				24.8	26.2	27.5
Macaroni.....	Lb.				18.2	18.1	17.7				13.9	15.6	13.2
Rice.....	Lb.	8.6	8.7	11.2	13.6	17.2	17.3	8.5	8.5	11.9	13.6	16.9	17.5
Beans, navy.....	Lb.			17.9	13.9	11.6	11.6			16.2	13.0	9.8	9.5
Potatoes.....	Lb.	1.7	1.6	3.0	3.1	4.4	5.7	1.6	1.9	2.7	3.0	4.5	5.9
Onions.....	Lb.			4.6	4.2	8.2	9.0			3.3	2.7	6.3	7.1
Cabbage.....	Lb.				5.0	5.9	8.6						
Beans, baked.....	(5)				16.3	15.5	14.7				21.2	18.0	18.2
Corn, canned.....	(5)				16.8	16.5	15.6				19.0	18.5	19.6
Peas, canned.....	(5)				17.3	16.1	16.1				18.6	18.6	18.8
Tomatoes, canned.....	(6)				15.6	14.9	14.9				15.9	13.3	13.3
Sugar, granulated.....	Lb.	5.8	4.7	8.7	10.9	18.6	20.6	5.7	5.3	8.6	10.6	11.9	14.4
Tea.....	Lb.	55.0	55.0	65.0	73.2	72.0	73.9	50.0	50.0	53.9	57.2	58.5	59.5
Coffee.....	Lb.	24.3	24.7	27.4	34.9	45.5	45.8	32.0	32.0	30.9	34.1	44.5	45.4
Prunes.....	Lb.			16.7	18.9	29.3	29.1			14.2	17.5	23.3	22.5
Raisins.....	Lb.			16.5	16.4	24.3	24.0			13.8	14.5	21.9	22.0
Bananas.....	Doz.				34.4	35.6	36.6				35.0	43.0	42.1
Oranges.....	Doz.				46.4	46.0	43.4				49.0	55.2	52.9

1 15-16-ounce can.

2 Baked weight.

3 8-ounce package.

PRICES AND COST OF LIVING.

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FOR JAN. 15, 1913, 1914, 1918, 1919, 1920, AND DEC. 15, 1919, FOR 19 CITIES—Concluded.

Seattle, Wash.						Washington, D. C.					
Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.	Jan. 15—				Dec. 15, 1919.	Jan. 15, 1920.
1913	1914	1918	1919			1913	1914	1918	1919		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
22.0	24.0	27.5	36.2	35.7	36.6	25.0	27.5	37.0	51.4	47.1	48.8
20.0	21.2	25.6	35.4	33.7	34.2	21.4	23.4	35.1	48.4	42.8	44.3
18.0	19.4	22.8	31.3	29.2	30.5	20.3	21.0	28.8	40.9	36.2	37.6
15.2	14.9	19.5	26.9	23.1	24.3	15.6	17.0	25.4	34.0	27.8	29.0
11.7	12.8	16.2	21.8	18.5	19.7	10.7	12.4	19.5	23.8	18.0	17.8
23.4	24.0	38.8	47.0	45.0	45.8	20.3	20.3	38.1	45.9	39.8	41.0
30.0	32.1	53.4	62.6	59.4	59.6	23.0	24.5	48.8	55.3	47.9	47.8
28.3	30.0	46.4	57.5	57.2	57.2	28.2	28.6	47.2	58.3	55.2	56.1
18.6	18.7	31.5	36.2	33.1	34.8	19.3	19.7	35.7	44.5	38.7	44.3
24.3	25.0	34.1	44.1	43.4	47.6	20.6	22.4	35.0	45.4	42.9	47.2
9.1	9.6	28.5	30.9	35.3	37.5	9.0	9.0	28.3	34.2	35.2	35.4
44.6	40.9	58.7	73.3	76.4	70.3	43.4	43.0	60.0	78.4	82.6	79.0
			43.3	40.6	39.9				38.2	42.5	44.0
			40.5	36.7	36.7				35.7	35.1	35.0
21.6	22.7	30.6	43.2	43.1	43.6	22.8	23.5	35.5	46.2	42.7	42.8
17.8	17.0	32.7	33.8	38.6	38.0	14.2	14.9	33.6	33.9	34.1	33.5
39.0	42.5	59.5	73.5	83.4	67.5	33.1	41.0	81.3	78.3	97.4	89.8
32.5	37.5	47.5	66.4	61.0	25.0	35.7	58.4	63.0	64.4	63.3	63.3
6.0	5.1	10.6	11.5	11.5	5.7	5.0		10.0	10.1	10.0	10.0
2.8	2.9	5.9	6.5	6.9	7.1	3.8	3.7	6.2	8.1	8.5	8.5
3.1	3.4	7.3	7.2	7.3	7.4	2.6	2.5	5.5	5.5	5.6	5.6
			7.9	8.6	9.0			8.9	10.7	11.0	11.0
			14.7	14.9	14.9				14.2	14.0	14.0
			27.6	28.8	31.4				24.2	26.6	27.6
			17.9	16.4	17.8				20.6	20.7	21.9
7.7	7.9	10.8	14.5	19.0	19.4	9.2	9.8	12.5	14.2	18.2	18.4
		17.7	14.8	11.6	11.0			20.0	14.5	12.6	12.4
1.0	1.4	1.9	2.3	4.2	5.5	1.6	2.0	3.5	3.1	3.9	5.0
		4.1	4.0	7.7	9.1			5.1	3.3	7.4	8.7
			4.8	6.3	7.8				3.6	6.1	8.8
			23.3	21.8	21.6				18.6	14.8	15.3
			20.4	20.4	20.6				20.7	19.0	18.6
			19.7	20.4	20.8				20.7	18.6	18.4
			19.7	17.5	16.7				17.4	17.4	16.5
6.1	5.8	8.9	10.4	12.8	13.7	5.5	4.9	9.6	10.4	13.6	18.1
50.0	50.0	56.1	62.7	63.6	64.4	57.5	63.9	63.9	75.0	75.9	77.1
28.0	30.0	31.8	35.4	48.1	48.6	28.8	28.8	29.6	33.5	47.5	48.1
			14.3	18.9	28.4			17.4	22.4	31.9	31.5
			14.9	15.4	24.4			15.2	15.0	24.3	24.4
				46.1	52.5				40.5	43.6	45.6
				59.5	58.1				48.8	49.8	48.2

*28-ounce package.

* No. 2 can.

TABLE 8.—RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Bridgeport, Conn.		Butte, Mont.		Charleston, S. C.		Cincinnati, Ohio.		Columbus, Ohio.	
		Dec. 15, 1919.	Jan. 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.
		Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.	Cents.
Sirloin steak.....	Lb.	49.9	49.4	32.7	36.4	37.8	38.2	30.6	33.0	34.7	35.8
Round steak.....	Lb.	47.1	46.6	27.9	29.8	37.0	38.3	29.1	31.4	32.7	33.9
Rib roast.....	Lb.	37.0	37.1	25.4	28.8	30.5	31.3	25.7	27.9	29.4	30.1
Chuck roast.....	Lb.	29.1	28.6	19.6	22.8	25.2	26.3	18.7	21.2	25.4	25.9
Plate beef.....	Lb.	14.7	14.6	13.8	16.2	19.0	21.4	17.4	19.7	18.1	18.6
Pork chops.....	Lb.	38.5	36.1	38.3	37.5	43.7	40.0	34.2	34.5	33.1	32.5
Bacon.....	Lb.	55.0	56.6	58.9	60.8	54.3	53.6	42.5	43.5	45.2	45.3
Ham.....	Lb.	59.5	59.5	60.0	61.7	52.0	51.9	48.0	49.0	49.3	48.8
Lamb.....	Lb.	35.1	37.7	27.7	29.3	40.4	40.6	30.6	34.6	33.3	35.0
Hens.....	Lb.	43.6	44.4	31.3	41.3	47.9	47.1	37.0	39.7	34.4	38.0
Salmon (canned).....	Lb.	39.0	37.2	45.0	43.2	34.7	35.4	35.7	35.9	35.0	36.5
Milk, fresh.....	Qt.	18.5	17.5	15.6	15.6	25.0	25.0	15.0	15.0	14.0	14.0
Milk, evaporated (unsweetened).....	(²)	17.0	17.0	18.5	18.5	17.2	17.6	16.4	16.5	16.8	17.1
Butter.....	Lb.	71.5	71.6	74.5	72.4	76.4	76.1	77.9	73.5	78.0	73.2
Oleomargarine.....	Lb.	43.3	43.0	.....	.....	45.7	45.3	42.1	41.6	42.7	42.7
Nut margarine.....	Lb.	35.4	35.5	.....	.....	45.7	46.7	34.5	34.5	35.3	35.4
Cheese.....	Lb.	43.2	42.6	46.1	45.4	42.6	43.7	43.7	44.1	43.2	43.2
Lard.....	Lb.	33.8	32.5	39.0	38.5	38.0	37.8	29.8	29.2	32.4	30.9
Crisco.....	Lb.	36.3	36.3	43.5	44.6	38.7	39.1	34.8	34.9	36.7	37.3
Eggs, strictly fresh.....	Doz.	111.0	103.8	90.0	83.5	76.7	78.3	80.5	82.8	85.3	79.2
Eggs, storage.....	Doz.	66.3	67.9	63.9	63.0	58.3	59.3	60.7	60.7	59.6	59.5
Bread.....	Lb. ³	10.4	10.4	12.3	12.4	10.0	10.0	9.9	10.1	9.8	9.8
Flour.....	Lb.	8.0	8.3	8.7	8.8	7.8	8.0	7.7	8.1	7.1	7.4
Corn meal.....	Lb.	8.5	8.6	7.8	8.0	5.2	5.0	5.5	5.6	5.9	6.2
Rolled oats.....	Lb.	10.0	10.0	9.1	9.9	10.4	10.6	7.6	9.1	9.5	10.9
Cornflakes.....	(⁴)	13.7	13.7	14.6	14.1	14.9	14.9	13.8	14.0	14.2	14.5
Cream of Wheat.....	(⁵)	26.8	27.8	31.2	31.6	27.7	29.9	26.5	28.6	27.0	28.2
Macaroni.....	Lb.	23.5	23.4	20.4	20.6	20.7	20.7	16.7	16.7	19.4	19.9
Rice.....	Lb.	17.4	17.8	17.8	18.4	14.7	15.7	17.7	18.4	17.5	18.8
Beans, navy.....	Lb.	12.1	12.0	13.0	13.0	14.7	15.1	10.6	10.6	11.1	11.3
Potatoes.....	Lb.	3.9	4.7	3.9	5.5	4.6	5.9	4.4	5.6	4.3	5.6
Onions.....	Lb.	8.6	9.0	7.6	8.0	9.1	11.0	6.7	8.4	8.6	9.0
Cabbage.....	Lb.	6.2	7.9	5.3	7.8	6.5	8.8	6.0	8.5	6.9	8.8
Beans, baked.....	(⁶)	16.4	16.1	22.1	21.7	15.3	14.9	15.9	15.5	17.1	16.2
Corn, canned.....	(⁶)	21.2	20.9	18.9	18.4	20.7	20.6	16.5	17.9	16.0	15.5
Peas, canned.....	(⁶)	20.9	20.0	19.0	18.5	21.9	22.3	17.1	17.2	16.5	16.3
Tomatoes, canned.....	(⁶)	17.6	15.3	18.7	17.3	15.7	15.0	15.4	15.1	15.3	15.3
Sugar, granulated.....	Lb.	11.3	19.1	14.1	14.4	14.0	13.9	18.7	19.1	16.6	18.5
Tea.....	Lb.	61.4	64.0	78.1	80.4	81.3	81.4	75.8	76.7	81.9	83.1
Coffee.....	Lb.	47.2	47.1	58.9	58.5	48.6	50.0	43.0	43.2	49.4	49.1
Prunes.....	Lb.	29.2	28.9	26.5	26.1	29.6	29.6	27.7	27.9	29.6	29.0
Raisins.....	Lb.	23.8	24.4	24.1	26.1	23.0	23.8	24.1	26.4	24.5	26.4
Bananas.....	Doz.	40.0	38.3	50.0	52.5	46.0	48.3	37.7	36.5	40.0	39.2
Oranges.....	Doz.	54.5	51.6	58.8	56.1	49.1	44.6	37.9	36.8	56.7	52.7

¹ The steak for which prices are here quoted is known as "sirloin" in most of the cities included in this report, but in this city it is called "rump" steak.

PRICES AND COST OF LIVING.

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OF FOOD FOR 31 CITIES ON DEC. 15, 1919, AND JAN. 15, 1920.

Dallas, Tex.		Fall River, Mass.		Houston, Tex.		Indianapolis, Ind.		Jacksonville, Fla.		Kansas City, Mo.	
Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.
<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
37.2	37.7	158.6	158.8	33.1	36.5	33.9	34.7	38.6	40.8	34.3	35.8
35.3	36.6	46.4	46.6	32.0	36.1	33.2	34.4	34.2	37.8	30.5	31.8
30.6	31.8	34.0	33.8	27.2	30.2	26.0	26.2	27.8	30.3	26.1	26.4
26.8	27.3	26.4	26.9	23.3	26.2	23.5	24.2	22.5	24.7	20.2	20.0
23.4	22.8			18.6	22.5	17.1	17.2	15.7	16.0	14.5	15.6
39.8	39.3	37.0	35.4	39.2	38.3	36.0	33.3	39.7	39.2	33.5	31.5
52.8	57.1	48.8	47.7	60.9	63.1	47.9	47.8	51.6	53.5	53.2	52.8
54.4	53.1	51.1	52.1	50.0	50.0	53.1	52.8	51.7	52.1	52.5	50.7
35.0	42.5	32.1	34.5	37.5	38.8	37.5	41.0	32.9	35.8	29.4	29.8
36.0	34.8	46.0	46.7	37.8	39.5	34.0	37.1	40.4	41.0	34.4	36.7
38.5	39.3	34.4	35.6	33.2	34.6	29.2	30.5	38.0	36.6	34.6	35.3
21.0	21.5	16.0	16.0	21.4	21.8	14.0	14.0	21.0	21.0	16.0	16.0
18.2	18.2	16.6	17.2	16.5	16.8	17.4	17.4	17.3	17.3	17.7	17.5
76.2	74.4	70.9	71.9	75.5	73.9	77.9	72.7	79.7	78.2	80.5	69.6
36.8	37.3	40.8	40.8	43.6	42.8	44.5	44.4	44.4	46.0	41.5	41.5
36.4	37.1	36.2	36.8	37.0	37.6	35.4	35.6	38.5	38.3	35.6	35.5
43.7	44.2	42.9	42.8	41.9	43.1	45.6	45.5	43.5	43.6	43.9	44.2
36.6	36.0	32.8	32.5	34.8	34.6	31.9	31.0	36.0	35.0	35.8	33.8
36.5	37.3	36.6	37.2	33.6	36.2	37.0	36.5	39.6	39.3	39.8	41.1
65.0	74.0	109.8	111.9	82.5	70.3	88.8	81.4	77.5	86.5	84.2	75.1
66.8	61.3	64.1	65.2	61.8	61.6	59.6	59.5	62.7	66.1	63.5	60.4
10.0	12.0	10.0	11.8	9.2	10.2	9.7	9.7	10.0	10.3	10.0	10.4
7.8	8.2	8.3	8.5	7.5	7.9	7.4	7.7	7.9	8.1	7.5	7.7
6.8	6.7	8.4	8.6	6.0	6.1	5.8	5.8	5.5	5.5	7.0	7.1
10.9	11.4	9.8	10.2	9.9	11.2	9.9	10.6	11.3	11.7	12.0	11.9
14.1	14.2	14.5	14.5	14.5	14.5	14.9	14.8	14.8	15.2	15.0	15.0
29.4	31.9	27.6	27.4	27.0	29.9	28.8	29.1	27.8	28.8	27.9	29.5
19.9	19.9	23.5	24.5	19.9	19.7	20.6	20.3	20.4	21.1	18.7	19.4
18.0	18.6	17.8	17.9	15.4	15.6	19.6	19.8	16.5	16.8	18.7	18.9
13.3	13.2	12.1	12.1	12.5	12.1	12.0	11.6	13.9	14.3	12.5	12.6
5.4	7.1	3.8	5.0	4.8	6.5	4.4	5.6	4.8	6.0	4.8	5.8
7.8	8.9	8.9	10.1	7.4	9.2	8.2	8.9	8.4	9.2	9.1	9.8
6.6	9.4	6.2	7.7	7.4	8.3	6.1	8.4	6.9	6.7	7.4	8.8
19.1	19.4	16.8	17.1	18.2	17.3	18.0	17.5	17.9	17.9	17.3	16.9
20.2	20.6	19.9	19.7	18.2	18.5	18.7	17.8	20.5	21.0	16.8	16.1
21.9	23.7	20.7	20.4	19.5	19.1	17.7	17.6	21.7	22.7	16.8	16.3
15.2	15.1	15.9	17.0	14.8	14.6	16.4	15.6	15.3	15.3	15.8	15.4
18.1	20.6	11.5	19.9	15.5	18.8	17.2	19.5	19.1	19.4	13.9	15.8
81.1	85.8	59.0	57.9	66.6	69.1	86.8	88.9	89.5	88.8	73.8	81.8
54.1	54.3	50.1	50.0	45.1	45.7	51.4	50.5	53.3	54.4	47.3	48.2
29.1	29.5	26.1	27.0	28.3	29.1	30.7	32.4	31.3	28.8	29.0	29.9
21.0	23.8	25.2	23.4	21.9	23.8	26.8	28.5	25.6	26.1	26.4	27.0
45.8	41.7	40.6	43.8	38.5	41.0	32.3	30.0	40.0	40.6	52.5	52.5
51.3	48.8	44.4	46.2	48.1	48.3	49.2	46.1	36.7	38.0	56.3	57.5

2 15-16-ounce can.

3 Baked weight.

4 8-ounce package.

5 28-ounce package.

6 No. 2 can.

TABLE 8.—RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Little Rock, Ark.		Louisville, Ky.		Manchester, N. H.		Memphis, Tenn.	
		Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Sirloin steak.....	Lb...	34.4	37.5	32.7	33.4	¹ 54.8	¹ 54.7	35.4	37.2
Round steak.....	Lb...	32.1	34.7	31.2	32.3	48.2	48.2	32.8	34.8
Rib roast.....	Lb...	27.9	32.1	26.0	27.5	31.0	31.8	28.3	30.8
Chuck roast.....	Lb...	23.2	25.0	22.9	23.9	26.9	27.5	22.5	24.6
Plate beef.....	Lb...	17.1	19.7	19.3	20.5			18.0	19.4
Pork chops.....	Lb...	39.5	37.8	31.6	32.6	36.3	35.5	36.1	35.3
Bacon.....	Lb...	54.7	55.6	47.9	49.5	46.6	46.8	53.6	53.2
Ham.....	Lb...	51.3	52.3	49.3	47.9	47.2	48.4	52.5	53.3
Lamb.....	Lb...	33.8	38.8	29.0	31.3	34.6	37.0	36.7	37.5
Hens.....	Lb...	33.9	35.2	36.8	40.1	45.9	46.7	36.9	39.5
Salmon (canned).....	Lb...	34.0	36.6	32.8	33.0	37.4	38.9	36.2	35.9
Milk, fresh.....	Qt...	20.0	20.0	16.0	16.0	15.0	15.0	19.0	20.0
Milk, evaporated (unsweet- ened).....	(³) Lb...	18.3	17.7	16.9	16.8	18.1	18.2	17.6	17.8
Butter.....	Lb...	77.4	74.1	77.8	74.9	79.9	80.7	79.5	75.7
Oleomargarine.....	Lb...	44.0	43.7	44.3	44.3	43.5	44.3	42.2	40.6
Nut margarine.....	Lb...	38.5	37.7	34.7	34.6	34.3	34.8	40.3	39.4
Cheese.....	Lb...	43.4	43.3	42.4	43.4	42.9	43.2	43.5	44.1
Lard.....	Lb...	37.2	37.6	31.2	30.9	36.1	35.2	34.2	33.9
Crisco.....	Lb...	39.1	39.4	35.0	34.8	37.2	37.4	36.9	37.6
Eggs, strictly fresh.....	Doz...	81.0	75.6	81.9	80.0	108.2	95.8	86.2	78.2
Eggs, storage.....	Doz...	66.4	65.9	60.3	61.3	64.8	64.9	66.2	59.8
Bread.....	Lb. ⁴	10.0	10.0	10.0	10.0	9.5	10.5	10.0	10.0
Flour.....	Lb...	7.5	7.9	7.5	7.9	8.2	8.6	7.6	8.0
Corn meal.....	Lb...	5.9	5.6	5.2	5.2	7.3	7.7	5.2	5.4
Rolled oats.....	Lb...	11.0	11.0	9.8	10.9	9.6	10.5	11.1	10.9
Corn flakes.....	(⁵) Lb...	14.7	14.6	14.0	13.8	14.9	14.9	14.3	14.3
Cream of Wheat.....	(⁶) Lb...	26.9	28.1	26.5	27.9	26.8	28.0	27.1	27.6
Macaroni.....	Lb...	19.0	18.2	17.3	19.5	24.3	24.7	19.3	19.6
Rice.....	Lb...	16.9	17.1	18.1	18.2	17.7	18.1	17.1	17.1
Beans, navy.....	Lb...	12.6	13.1	11.9	11.8	12.1	12.0	13.0	12.5
Potatoes.....	Lb...	4.5	5.7	3.8	4.8	3.5	4.3	4.9	6.1
Onions.....	Lb...	8.9	9.7	7.3	8.7	9.1	9.6	8.3	9.1
Cabbage.....	Lb...	7.7	9.0	6.3	8.2	5.1	7.5	6.2	8.6
Beans, baked.....	(⁷) Lb...	16.9	17.0	15.9	15.9	17.9	18.3	18.4	17.6
Corn, canned.....	(⁷) Lb...	18.1	17.6	17.9	17.5	20.9	21.9	18.6	18.5
Peas, canned.....	(⁷) Lb...	18.9	19.0	17.7	17.5	20.8	21.9	18.6	18.4
Tomatoes, canned.....	(⁷) Lb...	14.8	14.9	15.3	14.3	17.0	15.0	15.8	15.0
Sugar, granulated.....	Lb...	22.4	22.3	18.1	20.6	11.5	17.8	21.8	22.0
Tea.....	Lb...	85.8	87.3	79.8	85.3	62.1	63.2	87.7	89.4
Coffee.....	Lb...	51.4	53.6	48.7	47.8	51.5	51.6	53.3	51.6
Prunes.....	Lb...	27.7	27.8	29.1	28.0	29.8	29.3	33.9	33.4
Raisins.....	Lb...	26.5	25.1	23.7	24.0	25.3	26.0	24.4	24.1
Bananas.....	Doz...	38.6	35.5	37.1	40.4	40.0	42.5	41.4	43.5
Oranges.....	Doz...	50.9	53.1	42.7	38.1	55.8	53.9	44.0	44.1

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

PRICES AND COST OF LIVING.

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OF FOOD FOR 31 CITIES ON DEC. 15, 1919, AND JAN. 15, 1920—Continued.

Minneapolis, Minn.		Mobile, Ala.		Newark, N. J.		New Haven, Conn.		Norfolk, Va.		Omaha, Nebr.	
Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.
<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
32.2	33.2	33.6	35.0	44.0	44.9	52.2	52.6	43.5	42.9	36.1	36.1
28.1	30.0	32.7	34.2	41.6	44.8	46.3	47.1	39.2	37.8	32.9	32.8
26.5	29.0	30.0	31.0	35.6	36.4	37.3	37.9	35.9	35.8	26.2	26.1
20.8	21.7	23.6	25.4	27.4	27.9	30.5	31.6	27.3	28.2	21.9	21.6
14.2	15.3	19.5	19.9	18.0	17.7			17.9	19.7	15.3	15.7
35.0	32.9	45.0	42.3	38.6	37.1	36.7	35.4	39.2	37.4	35.1	32.6
53.8	54.2	57.5	56.9	46.0	45.8	53.8	52.1	46.8	48.6	53.9	53.3
50.0	52.1	52.0	53.8	50.0	35.0	55.4	55.3	42.5	45.0	54.6	54.1
28.2	29.5	34.3	35.0	36.5	38.7	38.3	39.1	35.8	39.0	31.8	32.9
32.0	37.3	42.1	40.0	40.7	42.5	43.7	44.6	43.9	47.1	33.6	37.2
44.2	43.8	38.8	40.2	38.0	39.3	34.1	38.1	34.0	35.3	38.2	38.8
13.0	13.0	21.0	23.5	18.0	18.0	16.0	16.0	21.0	21.0	16.4	15.9
18.0	17.9	17.7	17.8	15.7	15.8	16.8	16.8	16.6	16.1	17.8	17.8
75.0	69.4	78.5	78.3	82.6	76.3	72.5	72.3	78.0	78.1	79.1	72.8
41.9	42.2	44.9	44.5	42.8	42.5	43.8	44.0	49.0	48.1	44.4	44.7
33.1	33.1	40.4	40.9	35.5	35.2	36.1	35.6	39.3	38.3	35.9	35.5
41.9	41.4	44.3	43.8	44.3	44.0	42.7	42.9	42.4	43.0	44.4	43.4
33.9	32.6	36.5	35.8	35.3	34.2	34.4	33.0	37.1	36.4	36.8	35.7
38.6	38.0	38.2	37.9	36.1	36.0	36.0	35.4	38.2	38.4	39.0	38.6
96.3	73.6	84.3	77.0	98.4	96.8	108.6	98.7	85.2	78.5	86.7	72.3
61.9	58.6	65.1	62.4	65.9	65.2	64.4	64.9	64.5	62.9	65.4	59.3
9.8	10.8	9.6	10.0	9.8	10.0	10.6	10.9	10.0	10.0	10.0	10.0
8.1	8.5	7.3	8.0	7.9	8.1	8.1	8.4	7.8	8.2	7.3	7.8
6.5	6.7	6.1	6.1	7.6	7.9	7.8	7.7	5.7	6.0	6.7	6.4
7.3	8.2	11.2	11.6	9.2	8.8	9.4	10.1	10.4	11.0	9.0	11.2
14.6	14.9	14.7	14.5	12.3	12.3	14.1	14.0	14.5	14.7	15.0	15.0
29.8	30.9	26.8	29.6	26.0	27.3	27.6	28.2	27.6	27.1	28.8	29.4
18.7	17.9	18.9	19.7	21.9	22.2	21.0	21.7	20.0	21.3	20.7	20.6
19.0	19.1	16.5	16.7	17.1	17.6	18.0	17.9	19.1	19.6	18.2	18.4
12.0	12.2	14.0	13.6	12.1	11.9	12.3	11.7	13.2	12.8	13.3	12.6
3.7	5.1	5.0	4.4	4.5	5.7	3.8	4.6	4.2	5.3	4.4	5.7
7.9	9.3	8.4	9.0	9.2	9.3	8.9	9.4	8.7	9.0	9.0	9.9
5.6	7.3	5.7	7.1	6.0	7.6	6.6	8.2	5.5	7.5	7.1	8.2
18.3	18.5	17.8	17.4	14.7	14.5	17.9	17.8	14.2	14.2	21.1	20.4
17.7	17.9	19.8	19.7	20.4	19.5	21.6	20.8	20.6	20.5	18.3	18.2
17.8	17.7	18.9	18.8	19.8	18.8	21.9	21.9	21.6	22.0	19.3	18.9
16.7	16.2	15.2	15.2	15.3	14.9	16.1	15.5	17.5	15.3	17.4	17.3
14.0	18.9	21.3	19.2	11.2	16.6	12.1	18.6	12.9	17.6	18.2	19.0
64.1	62.8	75.0	77.4	56.4	58.2	63.5	63.1	83.1	85.9	78.6	77.5
54.2	53.1	46.2	44.5	45.9	46.1	51.4	50.4	52.0	52.8	53.6	54.9
31.2	31.6	28.1	27.0	26.3	26.5	29.6	29.6	30.7	30.6	30.4	29.0
21.8	22.9	25.4	28.6	22.2	22.8	24.9	25.4	23.5	23.1	26.4	26.3
47.5	49.2	30.6	29.6	41.0	41.8	37.5	36.2	40.0	41.0	47.5	50.0
56.6	58.5	42.9	47.1	54.2	52.3	58.7	53.8	50.2	48.6	55.0	55.3

² Whole ham.
³ 15-16-ounce can.

⁴ Baked weight.
⁵ 8-ounce package.

⁶ 28-ounce package.
⁷ No. 2 can.

TABLE 8.—RETAIL PRICES OF THE PRINCIPAL ARTICLES

Article.	Unit.	Peoria, Ill.		Portland, Me.		Portland, Oreg.		Providence, R.I.	
		Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.
Sirloin steak.....	Lb...	<i>Cents.</i> 33.3	33.1	<i>Cents.</i> 156.3	<i>Cents.</i> 155.8	<i>Cents.</i> 31.2	32.8	<i>Cents.</i> 66.7	66.4
Round steak.....	Lb...	30.7	32.1	45.7	45.9	29.8	31.0	54.3	52.5
Rib roast.....	Lb...	23.7	25.3	30.4	31.2	27.8	28.9	42.6	42.1
Chuck roast.....	Lb...	21.5	22.0	23.7	24.3	22.2	23.6	34.9	33.1
Plate beef.....	Lb...	15.4	16.3			16.5	17.6		
Pork chops.....	Lb...	33.9	32.7	40.4	36.8	42.1	40.9	39.8	40.7
Bacon.....	Lb...	50.2	50.9	48.2	51.5	55.6	54.4	49.3	49.0
Ham.....	Lb...	53.3	52.2	51.6	48.6	53.8	52.8	60.6	57.5
Lamb.....	Lb...	31.3	30.9	34.8	35.9	31.9	33.8	40.5	44.0
Hens.....	Lb...	32.4	36.3	44.4	46.1	41.1	43.8	47.4	47.0
Salmon (canned).....	Lb...	35.3	35.1	36.4	36.6	40.8	41.2	41.0	39.9
Milk, fresh.....	Qt...	14.3	14.3	15.0	15.0	15.9	15.8	17.0	17.0
Milk, evaporated (unsweet- ened).....	(²)	17.8	17.3	17.5	17.6	17.4	17.0	17.6	17.5
Butter.....	Lb...	76.3	70.7	78.4	76.3	76.1	71.0	76.6	74.7
Oleomargarine.....	Lb...	44.7	44.0	44.4	43.8	42.2	42.2	40.8	42.5
Nut margarine.....	Lb...	35.6	35.8	35.6	35.3	38.7	39.0	35.2	35.2
Cheese.....	Lb...	44.3	44.1	44.7	44.8	44.1	44.1	42.9	42.8
Lard.....	Lb...	34.6	32.8	35.1	33.2	40.0	40.0	34.6	32.8
Crisco.....	Lb...	38.3	39.1	38.0	36.6	42.7	42.7	37.2	36.9
Eggs, strictly fresh.....	Doz...	84.2	76.8	105.0	87.2	87.1	72.9	107.8	100.1
Eggs, storage.....	Doz...	62.7	62.0	67.9	66.6	67.5	65.0	64.8	64.9
Bread.....	Lb. ³ ...	10.0	10.0	11.0	11.0	10.6	10.6	10.7	11.4
Flour.....	Lb...	8.3	8.8	8.0	8.3	6.8	7.1	8.8	9.0
Corn meal.....	Lb...	6.2	6.4	6.8	6.7	7.7	7.7	6.5	6.3
Rollod oats.....	Lb...	9.4	11.4	7.9	8.3	9.1	10.1	9.8	9.8
Corn flakes.....	(⁴)	14.7	14.9	14.2	14.2	14.6	14.8	14.1	14.1
Cream of Wheat.....	(⁶)	29.4	30.0	28.0	29.2	31.3	33.6	27.3	28.8
Macaroni.....	Lb...	20.1	18.8	22.9	23.1	18.7	17.5	22.2	21.7
Rice.....	Lb...	18.2	18.2	16.7	17.5	17.9	18.9	17.8	18.4
Beans, navy.....	Lb...	12.1	12.1	12.1	12.0	11.0	11.4	11.7	11.6
Potatoes.....	Lb...	4.0	5.2	3.8	4.7	4.0	5.2	4.0	4.8
Onions.....	Lb...	7.7	9.9	8.8	9.6	6.4	7.8	8.8	9.6
Cabbage.....	Lb...	6.4	9.1	4.8	6.6	5.6	6.8	6.0	8.2
Beans, baked.....	(⁶)	18.1	18.5	19.3	19.0	22.0	21.6	16.8	16.8
Corn, canned.....	(⁶)	17.4	17.3	19.6	19.5	22.3	22.1	20.5	19.9
Peas, canned.....	(⁶)	18.3	18.5	21.1	20.3	22.9	22.1	20.4	20.9
Tomatoes, canned.....	(⁶)	15.5	15.2	19.0	19.2	18.9	18.7	17.8	15.7
Sugar, granulated.....	Lb...	14.0	18.7	11.3	13.0	12.5	12.9	11.6	21.3
Tea.....	Lb...	73.0	73.7	62.6	63.2	63.1	64.2	60.5	61.2
Coffee.....	Lb...	47.2	48.5	50.7	50.7	50.7	50.7	52.7	52.3
Prunes.....	Lb...	31.0	32.2	28.2	28.1	26.2	25.5	28.6	28.4
Raisins.....	Lb...	24.9	24.4	25.0	25.4	21.8	24.2	23.2	25.3
Bananas.....	Doz...	35.0	40.0	37.5	40.0	45.0	45.0	41.7	42.5
Oranges.....	Doz...	52.7	54.3	61.3	56.6	59.2	55.8	61.3	61.2

¹ The steak for which prices are here quoted is known as "porterhouse" in most of the cities included in this report, but in this city it is called "sirloin" steak.

OF FOOD FOR 31 CITIES ON DEC. 15, 1919, AND JAN. 15, 1920—Concluded.

Richmond, Va.		Rochester, N. Y.		St. Paul, Minn.		Salt Lake City, Utah.		Scranton, Pa.		Springfield, Ill.	
Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.	Dec. 15, 1919.	Jan. 15, 1920.
<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
41.0	42.9	38.1	38.9	32.8	36.1	31.5	33.4	42.5	44.6	32.1	35.5
37.6	39.1	34.4	35.6	28.8	31.2	28.4	30.1	36.8	38.7	32.0	33.9
34.5	33.6	30.5	31.2	28.8	30.1	24.8	26.5	33.7	35.4	22.9	24.6
27.3	28.6	27.3	27.4	22.9	24.4	20.3	22.0	27.4	27.8	20.1	21.8
22.5	23.1	18.4	19.1	15.0	15.9	15.4	16.1	17.4	18.1	16.0	17.8
39.5	37.6	38.9	38.1	34.0	33.1	40.4	40.0	42.6	40.1	35.5	34.4
46.6	43.2	42.0	41.8	46.8	48.2	52.3	52.9	53.6	54.3	45.4	45.5
46.7	46.5	48.5	49.7	48.1	49.7	53.3	51.1	47.5	52.6	48.9	48.3
39.3	40.8	30.2	36.4	27.4	32.0	26.8	30.4	40.7	39.5	31.9	37.8
39.7	46.4	40.8	42.9	31.2	36.9	33.1	35.1	45.5	47.2	31.5	32.9
27.5	27.8	37.1	37.6	37.7	38.9	37.1	37.1	38.8	40.5	35.8	36.9
16.7	16.5	14.8	15.0	13.0	13.0	12.5	12.5	15.0	15.0	16.7	16.7
17.3	17.5	17.3	17.6	17.6	17.7	16.0	15.8	16.4	16.3	18.6	18.4
82.6	81.1	75.5	74.4	74.1	68.4	76.8	67.6	73.2	73.2	78.9	70.8
43.3	44.6	44.4	44.4	41.2	41.0	42.0	42.0	45.3	44.7	44.9	44.5
38.1	37.4	34.8	34.7	34.6	34.9	38.5	38.3	36.1	36.0	36.3	35.6
43.7	44.1	42.0	41.8	42.6	42.5	42.7	42.6	41.4	41.8	44.8	44.6
35.7	35.4	34.8	34.2	34.5	33.8	39.6	37.5	36.5	35.2	35.9	33.6
38.5	38.7	36.4	36.1	39.7	40.5	44.5	44.3	38.4	38.7	40.6	40.6
83.1	78.3	102.5	91.8	94.5	72.7	83.8	72.7	108.3	95.5	82.0	78.1
66.3	63.5	62.7	62.6	62.3	60.3	67.0	61.7	63.5	65.3	65.2	65.3
10.9	10.9	10.0	10.2	9.2	10.5	10.3	10.6	10.0	10.5	10.0	10.0
8.1	8.4	8.0	8.6	8.2	8.7	6.5	6.9	8.3	8.8	8.1	8.7
6.2	6.1	7.3	7.0	6.6	6.4	7.4	7.4	9.1	8.5	6.4	6.4
10.5	11.2	7.5	7.5	7.8	8.8	9.1	9.9	10.5	11.1	9.9	11.3
14.5	14.7	13.9	13.9	14.5	14.7	14.8	14.6	14.2	14.1	15.0	15.0
27.8	27.7	27.8	28.6	30.2	30.7	29.7	30.6	26.4	27.9	28.5	30.1
18.6	18.9	20.8	20.2	19.5	19.5	19.5	20.1	22.2	23.0	19.5	19.0
18.9	19.3	18.4	18.4	18.8	18.6	17.3	17.7	18.6	18.9	19.3	19.2
13.3	13.5	12.1	12.1	11.8	11.9	13.4	13.2	14.5	14.5	12.8	12.6
4.8	5.4	3.8	4.7	3.5	4.5	4.0	5.2	3.9	4.8	4.4	5.7
8.6	8.8	7.6	9.0	7.8	8.8	7.0	7.8	7.7	9.3	7.9	9.7
6.6	9.1	4.7	6.8	5.1	6.7	6.3	8.8	4.4	6.7	6.0	8.0
14.3	14.5	14.8	14.5	19.3	19.2	20.0	19.6	16.1	16.3	19.2	17.6
19.4	19.4	19.6	19.9	17.7	17.7	17.8	18.4	19.4	19.3	17.0	17.0
22.0	21.9	19.7	19.8	17.4	17.2	18.2	17.9	18.8	18.3	18.7	18.8
18.8	18.7	16.3	16.0	16.0	15.0	16.9	16.2	17.9	15.5	16.7	16.0
11.9	19.9	11.9	18.4	14.4	18.2	12.8	13.8	12.4	19.4	14.7	22.2
84.3	83.8	64.7	63.5	65.0	67.7	79.2	79.9	67.5	68.1	84.2	85.8
46.6	49.8	46.3	47.6	51.0	51.1	57.8	58.3	49.5	50.3	51.2	51.1
29.5	29.6	28.7	29.8	30.4	30.0	27.9	27.3	28.5	28.9	33.1	30.2
23.6	23.9	23.4	25.7	24.4	24.6	24.8	25.0	24.6	25.1	25.0	25.0
45.5	45.0	41.6	42.3	56.7	60.0	47.0	56.7	34.3	37.3	50.0	36.3
43.8	44.3	49.8	54.1	58.1	60.0	53.8	53.9	55.9	52.9	51.9	52.7

* 15-16-ounce can.

* Baked weight.

* 8-ounce package.

* 28-ounce package.

* No. 2 can.

Comparison of Retail Food Costs in 50 Cities.

TABLE 9 shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles¹ combined, in January, 1920, compared with the average cost in the year 1913 and in January and December, 1919. For 11 other cities, comparisons are given for the one-year and one-month periods. These cities have been scheduled by the Bureau at different dates since 1913.

The average family expenditure is based on the prices sent to the Bureau each month by retail dealers, and on the average family consumption of these articles in each city.

The amounts given as the expenditures in January and December, 1919, and in January, 1920, represent the amounts necessary to buy a year's supply of these 22 food articles when purchased at the average retail prices charged in the months specified. This method makes it easier to note the increase over the year 1913. The year 1913 has been selected for the comparison because it was the last year before the war when prices were normal.

No attempt should be made in this table to compare one city with another, as the average number of persons in the family varies from city to city, and these 22 food articles represent a varying proportion of the entire food budgets according to locality. This table is intended to show merely comparisons in the retail cost of these 22 food articles for each city.

¹ See first paragraph of footnote on page 26; lamb is not included.

TABLE 9.—RETAIL COST OF 22 FOOD ARTICLES,¹ COMBINED, IN JANUARY, 1920, COMPARED WITH THE COST IN JANUARY AND DECEMBER, 1919, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

City.	Average family expenditure for 22 food articles, combined.				Percentage increase January, 1920, compared with—		
	1913	1919		January, ² 1920.	1913	January, 1919.	December, 1919.
		January. ²	December. ²				
Atlanta.....	\$361.00	\$683.04	\$729.80	\$724.46	101	6	3 1
Baltimore.....	335.15	679.48	668.08	681.98	104	1	3
Birmingham.....	377.53	732.08	787.24	777.64	106	6	3 1
Boston.....	388.16	692.87	733.87	757.14	95	9	3
Bridgeport.....		676.39	708.17	725.41		7	2
Buffalo.....	318.15	623.35	640.30	660.64	108	6	3
Butte.....		481.06	493.92	517.15		8	5
Charleston, S. C.....	348.60	692.50	713.67	721.08	108	5	1
Chicago.....	336.48	614.75	666.53	679.64	102	11	2
Cincinnati.....	338.26	620.02	656.65	681.56	101	10	4
Cleveland.....	354.01	653.59	699.25	696.08	97	7	3 1
Columbus.....		637.73	667.42	680.65		7	2
Dallas.....	395.41	739.01	759.17	796.04	101	8	5
Denver.....	247.36	461.63	474.56	470.40	90	2	3 1
Detroit.....	335.02	635.69	688.93	706.36	111	11	3
Fall River.....	375.51	681.49	712.94	752.38	100	10	6
Houston.....		709.52	738.62	768.10		8	4
Indianapolis.....	345.23	629.45	678.18	684.82	98	9	1
Jacksonville.....	377.10	695.89	708.50	734.17	95	5	4
Kansas City, Mo.....	340.12	637.37	676.17	672.43	98	6	3 1
Little Rock.....	390.14	707.97	754.02	769.63	97	9	2
Los Angeles.....	284.84	470.14	497.61	508.54	79	8	2
Louisville.....	363.85	637.88	696.32	715.05	97	4	3
Manchester.....	366.01	680.18	704.95	725.84	98	7	3
Memphis.....	368.46	703.83	754.27	741.77	101	5	3 2
Milwaukee.....	327.25	621.10	662.68	675.66	106	9	2
Minneapolis.....	319.98	573.60	657.41	667.21	109	16	1
Mobile.....		720.15	780.03	766.52		6	3 2
Newark.....	364.92	672.50	685.60	704.77	93	6	3
New Haven.....	376.96	701.09	718.31	735.92	95	5	2
New Orleans.....	369.29	705.09	719.88	750.76	103	6	4
New York.....	355.36	666.48	708.30	723.48	104	9	2
Norfolk.....		681.07	697.29	719.72		6	3
Omaha.....	334.52	625.54	696.01	689.47	106	10	3 1
Peoria.....		609.65	654.83	672.31		10	3
Philadelphia.....	352.19	666.89	689.15	704.83	100	6	2
Pittsburgh.....	350.35	668.46	691.77	710.29	103	6	3
Portland, Me.....		687.27	705.56	698.21		2	3 1
Portland, Oreg.....	266.03	463.26	488.03	490.72	84	6	3
Providence.....	380.85	716.73	761.77	783.19	106	9	3
Richmond.....	346.40	633.84	694.90	717.05	107	5	3
Rochester.....		627.87	655.74	677.68		8	3
St. Louis.....	326.36	623.76	667.10	687.41	111	10	3
St. Paul.....		598.36	650.90	659.58		10	1
Salt Lake City.....	261.87	448.88	466.37	468.81	79	4	1
San Francisco.....	271.48	467.25	493.51	506.36	87	8	3
Scranton.....	335.98	655.83	687.26	711.37	106	8	4
Seattle.....	265.35	477.73	500.15	504.38	90	6	1
Springfield, Ill.....		629.43	671.67	699.02		11	4
Washington, D. C.....	354.82	699.23	721.54	739.74	108	6	3

¹ See first paragraph of footnote on page 26; lamb is not included.² Cost of year's supply at prices charged in specified months.³ Decrease.

As shown in Table 9 the average family expenditure for 22 articles of food increased during the month from December 15 to January 15 in 41 cities and decreased in 9 cities. In Memphis and Mobile the decrease was 2 per cent and in Atlanta, Birmingham, Cleveland, Denver, Kansas City, Omaha, and Portland, Oreg., the decrease was 1 per cent. In each of 7 cities the expenditure increased 1 per cent; in 9 cities, 2 per cent; in 16 cities, 3 per cent; and in 6 cities, 4 per cent.

In Butte and Dallas, the increase was 5 per cent; and in Fall River, 6 per cent.

During the year period from January, 1919, to January, 1920, the greatest increase, or 16 per cent, was shown in Minneapolis. The next largest increase, or 11 per cent, was in Chicago, Detroit, and Springfield. The other cities showed increases ranging from 1 per cent in Baltimore to 10 per cent in Cincinnati, Fall River, Omaha, Peoria, St. Louis, and St. Paul. As compared with the average expenditure in the year 1913, the following cities showed an increase of 100 per cent and over: Fall River, 100 per cent; Atlanta, Cincinnati, Dallas and Memphis, 101 per cent each; Chicago, 102 per cent; New Orleans and Pittsburgh, 103 per cent each; Baltimore and New York, 104 per cent each; Birmingham, Milwaukee, Omaha, Providence and Scranton, 106 per cent each; Richmond, 107 per cent; Buffalo, Charleston, and Washington, 108 per cent each; Minneapolis, 109 per cent; and Detroit and St. Louis, 111 per cent each.

Retail Prices of Coal.¹

TABLE 10 shows the average retail prices of coal on January 15 and July 15 of each year, 1913 to 1919, inclusive, and on January 15, 1920, by cities. The prices are those quoted by the retail trade for household use.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages made on the several kinds. The coal dealers in each city were asked to quote prices on the kinds of bituminous coal usually sold for household use.

The prices quoted are for coal delivered to consumers but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

Prices are shown for coal only in the cities in which prices are scheduled for food and are shown for the years when food prices were obtained.

¹ Prices of coal are secured semiannually and published in the March and September issues of the MONTHLY LABOR REVIEW.

TABLE 10.—RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL, FOR HOUSEHOLD USE, ON JAN. 15 AND JULY 15 OF EACH YEAR, 1913 TO 1919, INCLUSIVE, AND JANUARY 15, 1920, BY CITIES.

City, and kind of coal.	1913		1914		1915		1916		1917 ¹		1918		1919		1920
	January.	July.	January.	July.	January.	July.	January.	July.	January.	July.	January.	July.	January.	July.	January.
Atlanta, Ga.: Pennsylvania anthracite— Stove.....															
Bituminous.....	\$5.875	\$4.833	\$5.285	\$5.083	\$5.250	\$4.575	\$5.050	\$4.500	\$7.000	\$7.444	\$7.778	\$8.029	8.250	\$14.667	\$9.050
Baltimore, Md.: Pennsylvania anthracite— Stove.....	2 7.700	2 7.240	2 7.700	2 7.280	2 7.620	2 7.138	2 7.650	2 7.800	2 8.160	2 9.600	2 10.450	2 11.983	2 11.750	2 12.500	2 12.500
Bituminous.....	2 7.930	2 7.490	2 7.950	2 7.520	2 7.870	2 7.363	2 7.880	2 7.950	2 8.310	2 9.750	2 10.550	2 12.042	2 11.850	2 12.600	2 12.600
Birmingham, Ala.: Bituminous.....												2 7.540	2 6.893	2 7.500	2 7.500
Boston, Mass.: Pennsylvania anthracite— Stove.....	4.217	4.011	4.228	3.893	4.090	3.646	3.913	3.644	5.080	5.616	6.461	6.741	7.286	7.496	7.496
Bituminous.....	8.250	7.500	8.000	7.500	7.750	7.500	8.000	8.000	9.500	9.850	10.250	12.000	12.000	12.750	12.750
Bridgeport, Conn.: Pennsylvania anthracite— Stove.....	8.250	7.750	8.250	7.750	8.000	7.750	8.250	8.000	9.500	9.850	10.250	12.000	12.000	12.750	12.750
Bituminous.....												10.250	9.000	9.500	9.500
Buffalo, N. Y.: Pennsylvania anthracite— Stove.....	6.750	6.542	6.817	6.650	6.850	6.650	6.850	7.010	7.600	8.830	9.180	10.400	10.700	10.890	10.890
Bituminous.....	6.992	6.800	7.067	6.900	7.100	6.900	7.100	7.260	7.850	8.830	9.240	10.500	10.800	10.990	10.990
Butte, Mont.: Bituminous.....					7.417	6.750	7.125	7.125	8.222	9.188	9.083	9.377	9.836	10.381	10.381
Charleston, S. C.: Pennsylvania anthracite— Stove.....	2 8.375	2 7.750	2 7.750	2 7.750	2 7.750	2 7.750	2 7.750	2 7.875	2 8.750	2 12.275		(2)	2 13.400	2 13.400	2 13.400
Bituminous.....	2 8.500	2 8.000	2 8.250	2 8.250	2 8.250	2 8.250	2 8.250	2 8.375	2 9.250	2 12.475		(2)	2 13.500	2 13.500	2 13.500
Chicago, Ill.: Pennsylvania anthracite— Stove.....	8.000	7.800	8.080	7.900	8.100	7.900	8.100	8.240	9.570	10.350	10.900	11.808	12.200	12.590	12.590
Bituminous.....	8.250	8.050	8.330	8.130	8.350	8.150	8.350	8.490	9.670	10.388	10.975	12.016	12.300	12.690	12.690
Bituminous.....	4.969	4.650	5.000	4.850	5.088	4.708	4.938	4.800	7.083	6.671	6.475	6.700	7.017	8.020	8.020

¹ Prices not secured by Bureau in July, 1917.

² Per ton of 2,240 pounds.

³ Zoned out by Fuel Administration.

Indianapolis, Ind.: Pennsylvania anthracite— Stove.....	8.950 8.300	8.300	7.750	8.250	8.250	8.500	10.167	9.325	10.250	12.250	13.000
Chestnut.....	9.150	8.500	7.950	8.450	7.950	8.450	10.233	9.925	10.500	12.250	13.167
Bituminous.....	3.813	3.700	4.611	4.673	4.208	4.411	6.800	7.107	6.193	7.375	8.188
Jacksonville, Fla.: Pennsylvania anthracite— Stove.....	10.000	9.000	9.125	9.000	9.000	9.000	11.000	12.000	(2)	15.000	17.000
Chestnut.....	10.000	9.000	9.125	9.000	9.000	9.000	11.000	12.000	(2)	13.000	17.000
Bituminous.....	7.500	7.000	6.875	7.500	7.000	7.500	8.000	9.333	9.825	10.000	11.000
Kansas City, Mo.: Pennsylvania anthracite— Stove.....										16.210	17.400
Chestnut.....										16.470	17.625
Arkansas anthracite— Furnace.....											
Stove, or No. 4.....		8.286	7.917	8.333	7.833	8.333	9.292	12.592	13.700	15.107	15.593
Bituminous.....	4.391	3.935	4.093	4.200	4.056	4.515	6.438	6.703	6.700	7.354	8.625
Little Rock, Ark.: Arkansas anthracite— Egg.....											
Stove.....											
Bituminous.....	6.000	5.833	5.833	5.972	5.361	6.000	8.000	8.250	9.155	12.975	13.333
Los Angeles, Calif.: New Mexico anthracite— Cerillos egg.....											
Bituminous.....	12.500	13.500	12.000	15.000	11.375	13.700	15.000	22.000	20.000	21.150	21.000
Louisville, Ky.: Pennsylvania anthracite— Stove.....	9.000	8.250	8.450	8.700							
Chestnut.....	9.000	8.250	8.450	8.700							
Bituminous.....	4.200	4.000	3.953	3.997	3.478	3.816	5.734	6.038	6.733	6.816	6.836
Manchester, N. H.: Pennsylvania anthracite— Stove.....	10.000	8.500	8.750	8.750	8.500	9.000	11.000	11.000	10.500	12.500	13.417
Chestnut.....	10.000	8.500	8.750	8.750	8.500	9.000	11.000	11.000	10.500	12.500	13.417
Bituminous.....									10.640	12.750	13.750
Memphis, Tenn.: Pennsylvania anthracite— Stove.....											
Chestnut.....											
Bituminous.....											
Milwaukee, Wis.: Pennsylvania anthracite— Stove.....	8.000	7.850	7.930	8.100	7.900	8.100	9.020	9.500	10.968	12.400	12.600
Chestnut.....	8.250	8.100	8.180	8.350	8.150	8.350	9.270	9.650	10.904	12.378	12.700
Bituminous.....	6.250	5.714	5.714	6.143	5.625	6.000	7.743	7.385	7.385	8.144	8.960

* Per 10-barrel lots (1,800 pounds).

2 Zoned out by Fuel Administration.

1 Prices not secured by Bureau in July, 1917.

PRICES AND COST OF LIVING.

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[illegible]

⁶ Per 25-bushel lots (1,900 pounds).

³ Per 10-barrel lots (1,800 pounds).

¹ Prices not secured by Bureau in July, 1917.

2 Zoned out by Fuel Administration.

TABLE 10.—RETAIL PRICES PER TON OF 2,000 POUNDS OF COAL, FOR HOUSEHOLD USE, ON JAN. 15 AND JULY 15 OF EACH YEAR, 1913 TO 1919, INCLUSIVE, AND JAN. 15, 1920, BY CITIES—Concluded.

City, and kind of coal.	1913		1914		1915		1916		1917 ¹		1918		1919		1920	
	1913		1914		1915		1916		1917 ¹		1918		1919		1920	
	January.	July.	January.	July.	January.	July.	January.	July.	January.	July.	January.	July.	January.	July.	January.	July.
San Francisco, Calif.:																
New Mexico anthracite—																
Cerillos egg.....	\$17.000	\$17.000	\$17.000	\$17.000	\$16.833	\$16.833	\$17.000	\$17.000	\$19.000	\$19.000	\$20.750	\$18.600	\$21.550	\$20.500	\$23.000	\$23.000
Colorado anthracite—																
Egg.....	17.000	17.000	17.000	17.000	16.833	16.833	17.000	17.000	19.000	19.000	18.600	18.600	19.400	19.400	21.750	21.750
Bituminous.....	12.000	12.000	12.091	12.400	12.273	12.333	12.250	12.250	13.429	13.429	13.867	14.083	14.200	13.591	16.100	16.100
Scranton, Pa.:																
Pennsylvania anthracite—																
Stove.....	4.250	4.313	4.500	4.313	4.438	4.125	4.375	4.800	5.250	5.250	6.113	6.050	7.475	7.683	8.233	8.233
Chestnut.....	4.500	4.563	4.750	4.563	4.688	4.313	4.625	4.800	5.250	5.250	6.150	6.150	7.563	7.783	8.300	8.300
Seattle, Wash.:																
Bituminous.....	\$7.125	\$7.200	\$6.167	\$5.800	\$5.906	\$5.313	\$5.528	\$5.750	\$5.850	\$5.850	\$7.867	\$9.133	\$9.163	\$9.103	\$9.588	\$9.588
Springfield, Ill.:																
Bituminous.....				2.646	2.078	2.094	2.563	2.750	2.706	2.706	3.711	3.661	3.832	3.976	3.950	3.950
Washington, D. C.:																
Pennsylvania anthracite—																
Stove.....	47.500	47.381	47.588	47.419	47.731	47.400	47.625	47.725	48.206	48.206	410.100	49.960	411.890	411.911	412.447	412.447
Chestnut.....	47.650	47.531	47.738	47.569	47.881	47.550	47.775	47.856	48.200	48.200	410.190	410.064	412.019	412.011	415.538	415.538
Bituminous.....												47.700	47.974	48.050	48.267	48.267

¹ Prices not secured by Bureau in July, 1917.

² At yard, delivery \$0.05 to \$2, according to distance.

³ Prices in Zone A.

⁴ Per ton of 2,240 pounds.

Table 11 shows for the United States both average and relative retail prices of Pennsylvania white ash coal, stove and chestnut sizes, and of bituminous coal on January 15 and July 15 of each year, 1913 to 1919, inclusive, and January 15, 1920. An average price for the year 1913 has been made from the averages for January and July of that year. The average prices for January and July of each year have been divided by this average price for the year 1913 to obtain the relative prices.

January, 1920, compared with January, 1913, shows an increase of 63 per cent in the price of Pennsylvania white ash stove coal, 61 per cent in the price of chestnut, and 62 per cent in the price of bituminous.

January, 1920, compared with January, 1919, shows an increase of 9 per cent in the price of Pennsylvania white ash stove, 11 per cent in the price of chestnut, and 12 per cent in the price of bituminous.

TABLE 11.—AVERAGE AND RELATIVE PRICES OF COAL IN TON LOTS FOR THE UNITED STATES ON JAN. 15 AND JULY 15 OF EACH YEAR, 1913 TO 1919, INCLUSIVE, AND JAN. 15, 1920.

Year and month.	Pennsylvania anthracite, white ash.				Bituminous.	
	Stove.		Chestnut.		Average price.	Relative price.
	Average price.	Relative price.	Average price.	Relative price.		
1913:						
Average for year.....	\$7.73	100	\$7.91	100	\$5.43	100
January.....	7.99	103	8.15	103	5.48	101
July.....	7.46	97	7.68	97	5.39	99
1914:						
January.....	7.80	101	8.00	101	5.97	110
July.....	7.60	98	7.78	98	5.46	101
1915:						
January.....	7.83	101	7.99	101	5.71	105
July.....	7.54	98	7.73	98	5.44	100
1916:						
January.....	7.93	103	8.13	103	5.69	105
July.....	8.12	105	8.28	105	5.52	102
1917:						
January.....	9.29	120	9.40	119	6.96	128
July.....	(¹)	(¹)	(¹)	(¹)	(¹)	(¹)
1918:						
January.....	9.88	128	10.03	127	7.68	141
July.....	9.96	129	10.07	127	7.92	146
1919:						
January.....	11.51	149	11.61	147	7.90	145
July.....	12.16	157	12.19	154	8.10	149
1920:						
January.....	12.59	163	12.77	161	8.81	162

¹ Prices not secured by Bureau in July, 1917.

Index Numbers of Wholesale Prices in the United States.

WHOLESALE prices in the United States continued to advance during January of the present year, the Bureau's weighted index number rising to 248 as compared with 238 for December and 203 for January, 1919, the average for the year 1913 being regarded as 100. Food products registered the greatest increase from December to January, the index number rising from 234 to 253, or slightly more than 8 per cent. The group of lumber and building materials showed practically 7 per cent increase (from 253 to 268), cloths and clothing nearly 4½ per cent (from 335 to 350), while metals and metal products advanced nearly 5 per cent (from 169 to 177). The index number for house-furnishing goods increased from 303 to 324, that for chemicals and drugs from 179 to 189, and that for miscellaneous articles from 220 to 227. Somewhat smaller increases were recorded for farm products (244 to 246), and fuel and lighting (181 to 184).

The large increase in the index number for the group of food commodities is due mainly to the rise in sugar and potatoes. The price of raw sugar in January advanced more than 26 per cent, granulated sugar nearly 42 per cent, and potatoes nearly 37 per cent above the December average. These articles, being heavily weighted because of their great importance, have a decided influence on the index number for the group. The decrease in the price of butter, eggs, and a few other commodities was offset by the increase in the price of coffee, flour, and meat products. In the cloths and clothing group, the increase in the index number is due largely to the rise in prices of cotton and woolen goods, carpets, and silk. The increase in the index numbers for the remaining groups is about what should be expected in view of the recent advances in the prices of iron and steel products, brick and lumber, household furniture, cottonseed meal, paper, and other staple articles.

In the 12 months from January, 1919, to January, 1920, as measured by changes in the index numbers, farm products increased nearly 11 per cent, food slightly more than 22 per cent, and cloths and clothing nearly 50 per cent. During the same time, fuel and lighting increased over 8 per cent, metals and metal products about 3 per cent, and lumber and building materials nearly 69 per cent. House-furnishing goods increased nearly 49 per cent in this time, and miscellaneous commodities about 7 per cent. Chemicals and drugs, on the contrary, decreased slightly more than 1 per cent in the same period.

INDEX NUMBERS OF WHOLESALE PRICES IN THE UNITED STATES, DECEMBER, 1919, AND JANUARY, 1920, AND JANUARY, 1913 TO 1919, BY GROUPS OF COMMODITIES.

[For detailed statement of index numbers since January, 1913, and for yearly data since 1890, see MONTHLY LABOR REVIEW for February, 1920, pages 87 to 89.]

[1913=100.]

Group.	December, 1919.	January, 1920. ¹	January.						
			1913	1914	1915	1916	1917	1918	1919
Farm products.....	244	246	97	101	102	108	148	207	222
Food, etc.....	264	253	99	102	106	113	150	187	207
Cloths and clothing.....	335	350	100	98	96	110	161	211	234
Fuel and lighting.....	181	184	103	99	93	105	176	157	170
Metals and metal products.....	169	177	107	92	83	126	183	174	172
Lumber and building materials.....	253	268	100	98	94	99	106	136	161
Chemicals and drugs.....	179	189	101	100	103	150	159	232	191
House-furnishing goods.....	303	324	100	99	99	105	132	161	218
Miscellaneous.....	220	227	100	99	100	107	138	178	212
All commodities.....	238	248	100	100	99	110	151	185	203

¹ Preliminary.

Wholesale Prices in the United States and Foreign Countries, 1890 to December, 1919.

IN THE following table the more important index numbers of wholesale prices in the United States and several foreign countries, as compiled by recognized authorities, have been reduced to a common base in order that the trend of prices in the several countries may be directly compared. The results here shown have been obtained by merely shifting the base for each series of index numbers to the year 1913, i. e., by dividing the index for 1913 on the original base into the index for each year or month on that base. These results are therefore to be regarded only as approximations of the correct index numbers in the case of series constructed by averaging the relative prices of individual commodities.¹ This applies to the index numbers of the *Annalist*, the *Economist*, the *Statist* (Sauerbeck), the Department of Labor of Canada, the *Statistique Générale* of France, and, presumably, the *Monthly Statistical Bulletin* of New South Wales, Australia. The index numbers of the U. S. Bureau of Labor Statistics, Bradstreet, Dun, Gibson, and the Bureau of Census and Statistics of Australia are built on aggregates of actual money prices, or relatives made from such aggregates of actual prices, and therefore can be readily shifted to any desired base. In cases where no index numbers for years are shown in the original sources, the figures here presented have been obtained by averaging the 12 monthly index numbers.

¹ For a discussion of the defects of index numbers constructed according to this method, see Bulletin No. 181 of the Bureau of Labor Statistics, pp. 245-252.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES.

[Index numbers expressed as percentages of the index number for 1913. See text explanation.]

Year and month.	United States.					United Kingdom.		Canada.	Australia.		France.
	Bureau of Labor Statistics: 328 commodities (variable).	Annalist: 25 commodities.	Bradstreet: 96 commodities.	Dun: 200 commodities.	Gibson: 22 commodities.	Economist: 44 commodities.	Statist (Sauerbeck): 45 commodities.	Department of Labor: 272 commodities (variable).	Commonwealth Bureau of Census and Statistics: 92 commodities.	New South Wales Monthly Statistical Bulletin: Number of commodities not shown.	Statistique Générale: 45 commodities.
1890.....	81	78	-----	175	75	83	85	81	97	-----	-----
1895.....	70	68	70	167	72	72	73	71	70	-----	-----
1900.....	80	71	86	77	76	90	88	80	82	-----	-----
1905.....	85	79	88	83	81	84	85	84	84	84	85
1910.....	99	98	98	98	102	93	92	92	92	88	93
1913.....	100	100	100	100	100	100	100	100	100	100	100
1914.....	100	104	97	101	105	99	100	100	106	95	102
1915.....	101	106	107	105	110	123	127	110	147	114	140
1916.....	124	126	128	123	129	160	160	134	138	137	188
1917.....	176	187	170	169	191	204	205	174	153	153	262
1918.....	196	205	203	190	211	225	226	205	-----	162	339
1919.....	212	211	203	190	209	235	242	216	-----	-----	-----
1914.											
January....	100	102	97	103	100	97	98	101	2 100	98	2 100
April.....	98	101	95	99	99	96	96	101	2 102	102	2 100
July.....	100	104	94	99	101	95	104	99	2 109	101	2 101
October....	99	107	100	102	108	101	106	102	2 113	95	2 107
1915.											
January....	99	108	99	103	111	112	118	103	2 127	101	2 124
April.....	100	109	106	103	117	124	125	108	2 153	109	2 135
July.....	101	105	107	103	111	122	126	111	2 167	115	2 142
October....	101	101	108	105	103	125	134	112	2 142	117	2 158
1916.											
January....	110	110	119	114	113	143	149	127	2 138	123	2 179
April.....	117	118	128	121	123	156	157	132	2 137	137	2 190
July.....	119	121	125	120	124	156	157	132	2 138	134	2 186
October....	134	136	131	126	141	171	175	138	2 139	140	2 198
1917.											
January....	151	151	149	140	150	184	187	154	140	150	215
February...	156	159	151	146	156	188	193	160	-----	151	225
March.....	161	170	154	154	166	197	199	163	-----	151	230
April.....	172	188	158	157	188	200	203	169	146	150	248
May.....	182	203	164	172	204	201	205	177	-----	153	256
June.....	185	198	168	176	197	210	211	179	-----	152	266
July.....	186	189	175	175	200	208	208	179	158	152	268
August.....	185	190	178	181	203	210	207	181	-----	156	270
September..	183	195	181	178	206	209	207	179	-----	152	280
October....	181	200	184	182	207	212	212	179	160	147	284
November...	183	199	185	183	206	215	214	183	-----	163	293
December..	182	200	191	182	209	215	218	187	-----	166	304
1918.											
January....	185	200	195	184	205	215	219	190	173	161	313
February...	186	204	196	188	210	216	220	194	-----	165	315
March.....	187	204	196	189	217	218	222	199	-----	156	329
April.....	190	207	200	191	225	221	223	199	178	155	337
May.....	190	207	205	188	216	223	225	204	-----	164	333
June.....	193	201	206	186	211	227	226	207	-----	163	329
July.....	198	203	208	192	212	228	227	210	1 80	160	337
August.....	202	207	208	192	210	233	230	210	-----	164	355
September..	207	210	207	193	212	231	232	211	-----	164	355
October....	204	203	207	193	205	231	233	214	181	160	360
November...	206	205	205	191	204	231	230	215	-----	159	358
December..	206	208	207	191	208	226	231	213	-----	163	353

1 Average for January and July.

2 Quarter beginning in specified month.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES—Concluded.

Year and month.	United States.					United Kingdom.		Canada.	Australia.		France.
	Bureau of Labor Statistics: 328 commodities (variable).	Annalist: 25 commodities.	Bradstreet: 96 commodities.	Dun: 200 commodities.	Gibson: 22 commodities.	Economist: 44 commodities.	Statist (Sauerbeck): 45 commodities.	Department of Labor: 272 commodities (variable).	Commonwealth Bureau of Census and Statistics: 92 commodities.	New South Wales Monthly Statistical Bulletin: Number of commodities not shown.	Statistique Générale: 45 commodities.
1919.											
January....	203	211	201	190	206	217	224	211	177	160	348
February....	197	201	192	182	201	216	221	206		151	340
March.....	201	209	187	180	212	212	217	205		157	337
April.....	203	222	188	182	223	214	217	206		150	332
May.....	207	226	187	184	220	222	229	210		157	325
June.....	207	216	196	189	212	230	235	210		168	330
July.....	218	219	205	193	220	240	243	217			349
August.....	226	220	217	200	218	242	250	222			347
September..	220	202	211	197	201	245	253	223			360
October.....	223	200	212	195	191	252	264	221			
November....	230	201	216	191	197	259	272	227			
December..	238	205	219	202	206	273	277	238			

Price Changes, Wholesale and Retail, of Important Food Articles in Selected Cities.

EXACT comparison of wholesale with retail prices is not attempted in the following tables. Some food products—fresh meats, for example—are not sold by the retailer in the same form in which they leave the wholesaler, hence strictly comparable prices are not obtainable. It was found impracticable also to obtain both wholesale and retail prices for the same date, the retail prices being those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days prior to the 15th. The figures in the table are therefore to be considered as merely indicative of price variations in the retail as compared with the wholesale markets.

To assist in comparing the fluctuations at wholesale and at retail, the differential between the two series of quotations at successive dates is given. It should not be assumed, however, that this differential in any case represents the margin of profit to the retailer, since, in addition to a possible difference of grade between the articles shown at wholesale and retail, the various items of handling cost to both the wholesaler and retailer are included in the figure.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale, R=retail. The wholesale price is the mean of the high and low quotation on the date selected, as published in leading trade journals. The retail price is the average of prices reported to the Bureau of Labor Statistics by dealers.]

Article and city.		Unit.	1913: Average for year.	July—				1918		1919					1920
				1914	1915	1916	1917	Jan.	July.	Jan.	July.	Oct.	Nov.	Dec.	Jan.
			Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	
Beef, Chicago:															
Steer loin ends.....	W.	Lb.	16.8	17.5	16.0	20.5	19.0	20.0	34.0	32.0	27.0	33.0	32.0	32.0	
Sirloin steak.....	R.	Lb.	23.2	26.0	25.8	28.1	30.2	30.2	37.7	37.5	39.3	36.6	37.0	35.9	
Price differential.....			6.4	8.5	9.8	7.6	11.2	10.2	3.7	5.5	12.3	3.6	5.0	3.9	
Beef, Chicago:															
Steer rounds, No. 2..	W.	Lb.	13.1	14.5	14.3	14.5	17.0	16.5	25.0	22.0	22.0	21.0	18.5	20.0	
Round steak.....	R.	Lb.	20.2	23.3	22.8	24.1	26.6	27.3	35.0	34.0	35.5	32.5	32.5	31.7	
Price differential.....			7.1	8.8	8.5	9.6	9.6	10.8	10.0	12.0	13.5	11.5	14.0	11.7	
Beef, Chicago:															
Steer ribs, No. 2....	W.	Lb.	15.7	16.5	14.5	17.5	20.0	20.0	28.0	30.0	24.0	28.0	30.0	28.0	
Rib roast.....	R.	Lb.	19.5	21.2	21.3	22.9	24.6	25.4	31.8	31.3	31.9	28.9	29.6	35.0	
Price differential.....			3.8	4.7	6.8	5.4	4.6	5.4	3.8	.....	7.9	.....	.....	.....	
Beef, New York:															
No. 2 loins, city....	W.	Lb.	15.8	18.3	17.0	20.0	19.0	23.5	28.0	37.0	28.5	37.0	42.0	42.0	
Sirloin steak.....	R.	Lb.	25.9	27.4	28.2	29.4	33.7	34.4	43.9	44.8	41.4	42.6	42.5	42.7	
Price differential.....			10.1	9.1	11.2	9.4	14.7	10.9	15.9	7.8	15.9	5.6	5	7	
Beef, New York:															
No. 2 rounds, city...	W.	Lb.	12.1	13.5	13.5	14.5	17.5	18.0	28.0	25.0	22.0	22.0	22.0	21.0	
Round steak.....	R.	Lb.	24.9	27.0	27.1	28.9	33.7	35.2	46.3	47.3	46.2	44.5	44.4	44.5	
Price differential.....			12.8	13.5	13.6	14.4	16.2	17.2	18.3	22.3	24.2	22.5	22.4	23.5	
Beef, New York:															
No. 2 ribs, city.....	W.	Lb.	15.1	16.5	16.0	18.0	19.0	23.5	28.0	35.0	27.5	30.0	36.0	36.0	
Rib roast.....	R.	Lb.	21.8	22.5	22.7	24.3	27.9	29.4	37.5	40.9	38.6	37.2	37.6	37.8	
Price differentialia.....			6.7	6.0	6.7	6.3	8.9	5.9	9.5	5.9	11.1	7.2	1.6	1.8	
Pork, Chicago:															
Loins.....	W.	Lb.	14.9	16.5	15.0	16.5	25.0	27.0	29.0	27.0	37.0	35.0	31.0	25.0	
Chops.....	R.	Lb.	19.0	20.4	20.1	21.7	29.2	31.6	35.5	35.2	41.7	41.0	36.8	33.3	
Price differential.....			4.1	3.9	5.1	5.2	4.2	4.6	6.5	8.2	4.7	6.0	5.8	8.3	
Pork, New York:															
Loins, western.....	W.	Lb.	15.2	16.3	15.3	16.5	23.5	26.5	30.5	33.0	37.0	39.0	40.0	30.0	
Chops.....	R.	Lb.	21.7	23.0	21.7	23.9	32.6	34.8	40.6	43.5	47.5	45.7	46.7	41.0	
Price differential.....			6.5	6.7	6.4	7.4	9.1	8.3	10.1	10.5	10.5	6.7	6.7	11.0	
Bacon, Chicago:															
Short clear sides....	W.	Lb.	12.7	13.9	11.3	15.9	24.7	30.1	27.4	29.4	33.1	23.3	23.1	24.1	
Sliced.....	R.	Lb.	29.4	31.8	31.5	32.8	43.9	49.8	54.7	61.6	61.5	54.6	54.2	52.7	
Price differential.....			16.7	17.9	20.2	16.9	19.2	19.7	27.3	32.2	28.4	31.3	31.1	28.6	
Ham, Chicago:															
Smoked.....	W.	Lb.	16.6	17.5	16.3	19.0	24.3	29.8	30.1	35.3	38.3	29.3	28.9	28.9	
Smoked, sliced.....	R.	Lb.	26.6	33.8	32.8	34.9	41.4	42.8	49.1	55.3	58.8	54.0	52.3	51.4	
Price differential.....			10.0	16.3	16.5	15.9	17.1	13.0	19.0	20.0	20.5	26.7	23.4	22.5	
Lard, New York:															
Prime, contract.....	W.	Lb.	11.0	10.4	8.0	13.3	20.1	24.6	26.2	24.2	35.8	29.0	26.8	23.6	
Pure, tub.....	R.	Lb.	16.0	15.6	15.1	16.8	27.4	33.0	32.2	33.1	42.5	35.7	36.3	34.3	
Price differential.....			5.0	5.2	7.1	3.5	7.3	8.4	6.0	8.9	6.7	6.7	9.5	10.7	
Lamb, Chicago:															
Dressed, round.....	W.	Lb.	14.9	17.0	19.0	19.0	26.0	24.0	31.0	28.0	29.0	24.0	23.0	22.0	
Leg of, yearling.....	R.	Lb.	19.8	21.9	20.8	23.1	28.7	30.6	35.7	34.2	36.2	33.1	32.9	32.3	
Price differential.....			4.9	4.9	1.8	4.1	2.7	6.6	4.7	6.2	7.2	9.1	9.9	10.3	
Poultry, New York:															
Dressed fowls.....	W.	Lb.	18.2	18.8	17.5	21.5	24.8	29.8	36.0	35.5	34.5	37.8	35.0	34.5	
Dressed hens.....	R.	Lb.	21.4	22.0	21.9	25.6	28.7	32.6	41.0	40.8	41.5	40.5	39.9	40.1	
Price differential.....			3.2	3.2	4.4	4.1	3.9	2.8	5.0	5.3	7.0	2.7	4.9	5.6	
Butter, Chicago:															
Creamery, extra.....	W.	Lb.	31.0	26.5	26.5	27.5	37.5	49.0	42.5	66.0	52.0	63.5	67.8	71.8	
Creamery, extra.....	R.	Lb.	36.2	31.2	32.2	33.5	43.3	54.4	48.0	71.3	57.1	67.8	73.6	74.4	
Price differential.....			5.2	4.7	5.7	6.0	5.7	5.4	5.5	5.3	5.1	4.3	5.8	2.6	
Butter, New York:															
Creamery, extra.....	W.	Lb.	32.3	28.0	27.0	28.5	39.5	51.0	44.4	67.0	51.0	66.8	69.5	73.5	
Creamery, extra.....	R.	Lb.	38.2	32.8	33.6	34.6	45.3	57.4	51.4	75.5	61.3	72.4	77.9	80.6	
Price differential.....			5.9	4.8	6.6	6.1	5.8	6.4	7.0	8.5	10.3	5.6	8.4	7.1	
Butter, San Francisco:															
Creamery, extra.....	W.	Lb.	31.7	24.5	26.5	25.5	38.5	53.0	50.0	64.5	56.5	66.0	67.5	68.0	
Creamery, extra.....	R.	Lb.	38.8	32.9	33.8	33.3	45.5	60.2	56.6	72.3	64.7	73.5	74.3	75.5	
Price differential.....			7.1	8.4	7.3	7.8	7.0	7.2	6.6	7.8	8.2	7.5	6.8	7.5	
Cheese, Chicago:															
Whole milk.....	W.	Lb.	14.2	13.3	14.5	14.5	21.6	23.3	22.7	36.3	30.9	27.4	30.6	30.1	
Full cream.....	R.	Lb.	.....	.....	22.9	24.2	33.9	37.5	34.5	43.9	44.1	44.4	44.6	45.0	
Price differential.....			.....	.....	8.4	9.7	12.3	14.2	11.8	7.6	13.2	17.0	14.0	14.9	

1 Price is for different quality of beef from that quoted at wholesale.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Av- erage for year.	July—				1918		1919				1920	
			1914	1915	1916	1917	Jan.	July.	Jan.	July.	Oct.	Nov.	Dec.	Jan.
Cheese, New York:			Cts.	Cts.										
Wholemilk, State.. W.	Lb.	15.4	14.4	14.6	15.1	23.8	23.0	23.9	36.8	31.5	30.3	31.9	31.5	31.4
Full cream..... R.	Lb.			22.9	22.8	32.8	34.4	33.2	42.7	42.8	42.3	42.9	43.1	43.3
Price differential.....				8.3	7.7	9.0	11.4	9.3	5.9	11.3	12.0	11.0	11.6	11.9
Cheese, San Francisco:														
Fancy..... W.	Lb.	15.9	12.5	11.5	13.5	20.0	25.5	26.0	33.5	32.0	33.0	35.5	33.5	32.5
Full cream..... R.	Lb.			20.0	22.9	29.7	33.5	32.3	41.9	41.2	44.7	44.4	44.8	43.2
Price differential.....				8.5	9.4	9.7	8.0	6.3	8.4	9.2	11.7	8.9	11.3	10.7
Milk, Chicago:														
Fresh..... W.	Qt.	3.8	3.6	3.7	3.6	4.7	7.0	5.3	8.4	6.8	8.2	8.1	8.1	8.1
Fresh, bottled..... R.	Qt.	8.0	8.0	8.0	8.1	10.0	11.9	12.0	14.0	14.0	15.0	15.0	15.1	15.0
Price differential.....		4.2	4.4	4.3	4.5	5.3	4.9	6.7	5.6	7.2	6.8	6.9	7.0	6.9
Milk, New York:														
Fresh..... W.	Qt.	3.5	3.0	3.0	3.1	5.0	8.1	5.4	9.2	7.1	7.3	7.8	8.5	8.5
Fresh, bottled..... R.	Qt.	9.0	9.0	9.0	9.0	11.4	15.0	12.7	16.0	16.0	16.0	17.7	18.0	18.0
Price differential.....		5.5	6.0	6.0	5.9	6.4	6.9	7.3	6.8	8.9	8.7	9.9	9.5	9.5
Milk, San Francisco:														
Fresh..... W.	Qt.	3.8	3.9	3.8	3.8	4.3	6.6	5.9	7.4	7.4	7.4	7.4	7.9	8.8
Fresh, bottled..... R.	Qt.	10.0	10.0	10.0	10.0	10.0	12.1	12.1	14.0	14.0	14.2	15.0	15.3	15.8
Price differential.....		6.1	6.1	6.2	6.2	5.7	5.5	6.2	6.6	6.6	6.8	7.6	7.4	7.0
Eggs, Chicago:														
Fresh, firsts..... W.	Doz.	22.6	18.8	16.8	21.8	31.0	56.5	36.5	58.8	42.0	56.8	60.5	80.0	68.5
Strictly fresh..... R.	Doz.	29.2	26.1	24.8	29.6	40.6	65.1	45.7	69.5	53.2	65.6	74.2	82.1	77.8
Price differential.....		6.6	7.3	8.0	7.8	9.6	8.6	9.2	10.7	11.2	8.8	13.7	2.1	9.3
Eggs, New York:														
Fresh, firsts..... W.	Doz.	24.9	21.5	20.0	24.1	35.0	64.5	40.0	61.3	44.5	61.0	65.5	87.0	77.5
Strictly fresh..... R.	Doz.	39.7	35.3	32.6	37.2	47.7	80.8	57.3	78.1	66.4	80.0	88.1	101.3	95.8
Price differential.....		14.8	13.8	12.6	13.1	12.7	16.3	17.3	16.8	21.9	19.0	22.6	14.3	18.3
Eggs, San Francisco:														
Fresh..... W.	Doz.	26.8	23.0	22.0	24.0	32.0	61.0	44.0	53.0	45.0	59.5	64.0	76.0	54.5
Strictly fresh..... R.	Doz.	37.3	33.8	33.0	33.3	39.2	71.0	51.4	65.7	56.6	79.1	88.7	83.9	68.9
Price differential.....		10.5	10.8	9.0	9.3	7.2	10.0	7.4	12.7	11.0	9.6	24.7	7.9	14.4
Meal, corn, Chicago:														
Fine..... W.	Lb.	1.4	1.6		1.9	4.5	5.1	5.4	3.6	4.6	3.6	3.7	3.8	3.7
Fine..... R.	Lb.	2.9	2.8	3.1	3.1	5.8	7.0	6.8	5.8	6.1	6.7	6.7	6.6	6.6
Price differential.....		1.5	1.2		1.2	1.3	1.9	1.4	2.2	1.5	3.1	3.0	2.8	2.9
Beans, New York:														
Medium, choice..... W.	Lb.	4.0	4.0	5.8	9.8	15.4	14.1	11.9	9.9	7.5	7.9	7.8	7.8	7.9
Navy, white..... R.	Lb.			8.1	11.3	18.8	18.5	17.5	15.3	12.2	12.3	12.6	12.3	12.5
Price differential.....				2.3	1.5	3.4	4.4	5.6	5.4	4.7	4.4	4.8	4.5	4.6
Potatoes, Chicago:														
White..... W.	Lb.	1.0	2.4	.7	1.6	4.4	2.0	1.5	1.9	1.4	2.2	2.9	3.2	4.3
White..... R.	Lb.	1.5	2.7	1.2	2.3	5.0	2.8	3.7	2.7	5.0	3.4	3.8	4.1	5.2
Price differential.....		.5	.3	.5	.7	.6	.8	2.2	.8	3.6	1.2	.9	.9	.9
Rice, New Orleans:														
Head..... W.	Lb.	5.0	5.4	4.9	4.6	7.1	8.8	9.3	9.1	10.5	12.4	12.9	12.4	12.6
Head..... R.	Lb.			7.5	7.4	10.1	10.6	11.9	12.0	14.2	14.8	15.1	15.4	16.0
Price differential.....				2.6	2.8	3.0	1.8	2.6	2.9	3.7	2.4	2.2	3.0	3.4
Sugar, New York:														
Granulated..... W.	Lb.	4.3	4.2	5.9	7.5	7.4	7.3	7.4	8.8	8.8	8.8	8.8	8.8	15.7
Granulated..... R.	Lb.	4.9	4.6	6.3	7.9	8.4	9.7	8.8	10.1	10.0	10.8	10.8	11.9	17.3
Price differential.....		.6	.4	.4	.4	1.0	2.4	1.4	1.3	1.2	2.0	2.0	3.1	1.6

¹ Good to choice.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN
SELECTED CITIES (AVERAGE FOR 1913=100).

Article and city.	Average for 1913.	July.				1918		1919					1920
		1914	1915	1916	1917	Jan.	July.	Jan.	July.	Oct.	Nov.	Dec.	Jan.
Beef, Chicago:													
Steer loin ends (hip).....W..	100	104	95	122	113	119	202	170	161	196	170	190	190
Sirloin steak.....R..	100	112	111	121	130	130	163	162	169	158	159	155	160
Beef, Chicago:													
Steer rounds, No. 2.....W..	100	111	109	111	130	126	191	168	168	160	141	153	153
Round steak.....R..	100	115	113	119	132	135	173	168	176	161	161	157	158
Beef, Chicago:													
Steer ribs, No. 2.....W..	100	105	92	111	127	127	178	171	153	178	191	178	223
Rib roast.....R..	100	109	109	117	126	130	163	159	164	148	152	149	154
Beef, New York:													
No. 2 loins, city.....W..	100	116	108	127	120	149	177	234	180	234	266	266	234
Sirloin steak.....R..	100	106	109	114	130	130	170	173	171	164	164	165	167
Beef, New York:													
No. 2 rounds, city.....W..	100	112	112	120	145	149	231	207	182	182	182	174	174
Round steak.....R..	100	108	109	116	135	141	186	190	186	179	178	179	179
Beef, New York:													
No. 2 ribs, city.....W..	100	109	106	119	126	156	185	232	182	199	238	238	205
Rib roast.....R..	100	103	104	111	128	135	172	188	177	171	172	173	176
Pork, Chicago:													
Loins.....W..	100	111	101	111	168	181	195	181	248	235	208	168	168
Chops.....R..	100	107	106	114	154	166	187	185	219	216	194	175	171
Pork, New York:													
Loins, western.....W..	100	107	101	109	155	174	201	217	243	257	263	197	191
Chops.....R..	100	106	100	110	150	160	187	200	219	211	215	189	184
Bacon, Chicago:													
Short clear sides.....W..	100	109	89	125	194	237	216	232	261	183	182	190	170
Sliced.....R..	100	108	107	112	149	169	186	210	209	186	184	179	181
Ham, Chicago:													
Smoked.....W..	100	105	98	114	146	180	181	213	231	177	174	174	174
Smoked, sliced.....R..	100	127	123	131	156	161	185	208	221	203	197	193	195
Lard, New York:													
Prime, contract.....W..	100	95	73	121	183	224	238	220	325	264	244	215	223
Pure, tub.....R..	100	98	94	105	171	206	201	207	266	223	227	214	211
Lamb, Chicago:													
Dressed, round.....W..	100	114	128	128	174	161	208	188	195	161	154	148	195
Leg of, yearling.....R..	100	111	105	117	145	155	180	173	183	167	166	163	187
Poultry, New York:													
Dressed fowls.....W..	100	103	96	118	136	164	198	195	190	208	192	190	194
Dressed hens.....R..	100	103	103	120	134	152	192	191	194	189	186	187	188
Butter, Chicago:													
Creamery, extra.....W..	100	85	85	89	121	158	137	213	168	205	219	232	200
Creamery, extra.....R..	100	86	89	93	119	150	133	197	158	187	203	206	191
Butter, New York:													
Creamery, extra.....W..	100	87	84	88	122	158	137	207	158	207	215	228	198
Creamery, extra.....R..	100	96	88	91	119	150	135	198	160	190	204	211	197
Butter, San Francisco:													
Creamery, extra.....W..	100	77	84	80	121	167	158	203	178	208	213	215	192
Creamery, extra.....R..	100	85	87	86	117	155	146	186	167	189	191	195	183
Milk, Chicago:													
Fresh.....W..	100	95	97	95	124	184	139	221	179	216	213	213	213
Fresh, bottled, delivered.....R..	100	100	100	101	125	149	150	175	175	188	188	189	188
Milk, New York:													
Fresh.....W..	100	86	86	89	143	231	154	263	203	209	223	243	243
Fresh, bottled, delivered.....R..	100	100	100	100	127	167	141	178	178	178	197	200	200
Milk, San Francisco:													
Fresh.....W..	100	100	97	97	110	169	151	190	190	190	190	203	225
Fresh, bottled.....R..	100	100	100	100	100	121	121	140	140	142	150	153	158
Eggs, Chicago:													
Fresh, firsts.....W..	100	83	74	96	137	250	162	260	186	251	268	354	303
Strictly fresh.....R..	100	89	85	101	139	223	137	238	182	235	254	281	266
Eggs, New York:													
Fresh, firsts.....W..	100	86	80	97	141	259	161	246	179	245	263	349	311
Strictly fresh.....R..	100	89	82	94	120	204	144	197	167	202	222	255	241
Eggs, San Francisco:													
Fresh.....W..	100	86	82	90	119	228	164	198	168	222	239	284	203
Strictly fresh.....R..	100	91	83	89	105	190	138	176	152	212	238	225	185
Meal, corn, Chicago:													
Fine.....W..	100	114	-----	136	321	364	386	257	329	257	264	271	264
Fine.....R..	100	97	107	107	200	241	234	200	210	231	231	228	228
Potatoes, Chicago:													
White, good to choice.....W..	100	237	66	160	429	200	150	190	140	220	290	320	430
White.....R..	100	182	78	151	331	187	247	180	333	227	253	273	347
Sugar, New York:													
Granulated.....W..	100	98	137	174	172	170	172	205	205	205	205	205	365
Granulated.....R..	100	94	129	161	171	198	180	206	204	220	220	243	353

Cost of Living in Lawrence, Mass., in 1919.

THE National Industrial Conference Board has recently published the results of a study¹ undertaken for the purpose of "ascertaining the cost of maintaining a minimum but reasonable standard of living for a representative wage earner's family" consisting of man, wife, and three children under 14, and the cost of maintaining "a somewhat better standard, according to conditions actually existing" in Lawrence, Mass. Using the standard budgets developed in a similar study made by the board, in Fall River, the board secured the prices being charged for food, clothing, shelter, fuel, light, and sundries.

It was found that the minimum average cost of all items combined was \$1,385.79. To maintain this minimum standard would require an average weekly income of \$26.65 the year round. The more liberal budget was found to require a yearly expenditure of \$1,658.04, to meet which the family must have a steady weekly income of \$31.88. The budget makes no provision for savings except such as are effected through insurance.

The following table shows for each item of expenditure the average cost per week and per year of the minimum budget and the more liberal budget. For the sake of comparison the average annual expenditure of 109 families in Lawrence, as shown by an investigation made in 1918 by the United States Bureau of Labor Statistics, is given.²

BUDGETS ESTABLISHED BY NATIONAL INDUSTRIAL CONFERENCE BOARD, NOVEMBER, 1919, AND EXPENDITURE FOR THE SAME ITEMS, AS SHOWN BY THE BUREAU OF LABOR STATISTICS STUDY, 1918, FOR FAMILIES OF LAWRENCE, MASS.

Item of expenditure.	Budget of National Industrial Conference Board.				U. S. Bureau of Labor Statistics study, 1918.
	Minimum standard.		More liberal standard.		
	Average weekly cost.	Average yearly cost.	Average weekly cost.	Average yearly cost.	
Food.....	\$11. 55	\$600. 60	\$12. 55	\$652. 60	\$651. 46
Shelter.....	3. 50	182. 00	4. 50	234. 00	176. 59
Clothing.....	5. 11	265. 61	6. 54	340. 26	258. 06
Fuel and light.....	1. 37	71. 34	1. 69	87. 98	77. 72
Sundries.....	5. 12	266. 24	6. 60	343. 20	340. 83
All items.....	26. 65	1, 385. 79	31. 88	1, 658. 04	1, 504. 67

The "representative wage earner's family" taken by the board consisted of man, wife, and three children—a boy 13 to 14 years of

¹ National Industrial Conference Board. The cost of living among wage earners, Lawrence, Mass., November, 1919. Boston, 1919. 21 pp.

² MONTHLY LABOR REVIEW, May, 1919, p. 156.

age, a girl 8 to 9 years of age, and a boy 5 to 6 years of age. In terms of the standard of food requirement established by the Bureau of Labor Statistics, this is a family of 3.95 equivalent adult males as compared with the average family of 3.64 equivalent adult males of the Bureau's study. The annual expenditure for food per equivalent adult male amounts to \$165.22 in the board's study and \$178.97 in the Bureau's study. The allowance made by the National Industrial Conference Board as a fairly liberal expenditure for this item is therefore \$13.75 less per year than the amount actually spent by the 109 families studied by the Bureau. The Bureau's study, however, included in this number families with incomes ranging from less than \$900 up to \$2,500. For the 24 families of 3.18 equivalent adult males each, taken in the Bureau's study, having incomes of \$1,500 and under \$1,800—in which group the income allowed by the board would fall—the expenditure for food was \$652.02, or a yearly average of \$205.04 per equivalent adult male. Here the difference between the amount allowed by the National Industrial Conference Board and the amount found by the Bureau actually to have been spent is still greater, being \$39.82. It must be remembered also that this difference takes no account of the increase in the price of food since 1918¹ when the Bureau's investigation was made.

With the exception of the item of food, however, the figures arrived at by the board in its study and those shown by the Bureau are in substantial agreement, if allowance is made for increases since 1918.

The board found that the following increases in the items of its budget have taken place since 1914:

INCREASE IN COST OF ITEMS OF BUDGET BETWEEN NOVEMBER, 1914, AND NOVEMBER, 1919.

Item.	Minimum standard.	More liberal standard.
	<i>Per cent.</i>	<i>Per cent.</i>
Food.....	95	95
Shelter.....	35	35
Clothing.....	120	107
Fuel, heat, and light.....	59	60
Sundries.....	85	76
All items.....	84	80

¹ Figures published by the Bureau (MONTHLY LABOR REVIEW, January, 1920, p. 72) show that the retail prices of 22 articles of food increased 4.9 per cent between Nov. 15, 1918, and Nov. 15, 1919.

Changes in Retail Prices in Canada, 1914 to 1919.

THE Canadian Labor Gazette for January, 1920 (pp. 86-92), gives a review of price movements in the Dominion during 1919, with a table showing index numbers of wholesale prices by groups of commodities in certain months of the years 1914 to 1919, and another table giving the cost per week of a family budget of staple foods, fuel and lighting, and rent in terms of the average prices in 60 cities. The data in the second table are also presented by Provinces. The following table summarizes the information contained in the second table, the prices given being confined to two months in each year 1914 to 1918, and to three months in 1919.

COST PER WEEK OF A FAMILY BUDGET OF STAPLE FOODS, FUEL AND LIGHTING, AND RENT IN TERMS OF THE AVERAGE PRICES IN 60 CITIES IN CANADA.

Commodity.	Unit.	1914		1915		1916		1917		1918		1919		
		Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Jan.	July.	Dec.
Beef, sirloin steak.....	2lbs.	Cts. 46.4	Cts. 49.4	Cts. 47.2	Cts. 49.2	Cts. 47.2	Cts. 52.6	Cts. 53.8	Cts. 63.6	Cts. 63.8	Cts. 79.6	Cts. 73.6	Cts. 79.8	Cts. 69.4
Beef, shoulder roast.....	2lbs.	32.6	33.6	32.8	33.4	32.4	35.2	34.8	43.5	45.0	57.8	51.6	55.2	45.6
Veal.....	1lb.	16.6	17.4	17.6	17.3	17.8	19.2	20.3	22.8	25.3	28.3	27.7	28.3	25.5
Mutton.....	1lb.	20.9	20.9	20.4	21.3	21.1	23.9	24.8	28.9	31.2	36.8	34.9	36.3	32.3
Pork, fresh.....	1lb.	20.6	20.2	19.0	19.5	19.9	22.4	24.6	30.0	33.1	37.7	36.9	42.1	35.7
Pork, salt.....	2lbs.	36.2	37.4	35.8	34.4	36.0	38.8	44.8	54.1	62.6	70.4	70.8	75.2	70.6
Bacon.....	1lb.	24.8	25.5	25.1	26.6	26.7	28.7	31.2	39.8	44.8	51.0	51.0	56.3	51.8
Lard.....	2lbs.	37.2	36.8	35.6	35.8	36.6	40.4	48.6	62.3	66.6	73.8	73.8	83.8	77.8
Eggs, fresh.....	1 doz.	45.5	26.9	45.5	25.3	46.4	31.0	56.0	38.8	63.3	49.3	73.6	52.7	82.4
Eggs, storage.....	1 doz.	33.4	24.9	34.9	24.9	36.1	28.0	45.3	35.9	51.2	43.1	62.5	48.1	68.5
Milk.....	6qts.	55.2	51.0	55.2	52.2	52.2	45.0	59.4	59.3	71.4	70.8	82.8	78.6	88.8
Butter, dairy.....	2lbs.	61.0	49.8	61.8	56.2	66.6	60.4	88.4	75.5	93.8	91.4	106.0	100.2	132.4
Butter, creamery.....	1lb.	35.9	30.0	35.0	32.6	38.1	34.5	48.9	42.5	51.2	51.7	59.1	60.4	72.6
Cheese, old.....	1lb.	21.3	21.1	22.5	24.6	24.4	25.6	30.5	33.4	33.3	33.4	35.7	40.3	40.9
Cheese, new.....	1lb.	19.6	19.4	20.5	22.6	22.4	23.6	28.8	30.3	30.4	30.6	33.9	38.8	37.6
Bread.....	15lbs.	64.2	63.0	67.5	73.5	66.0	70.5	91.5	110.4	114.0	117.0	120.0	120.0	118.5
Flour.....	10lbs.	32.0	33.0	39.0	41.0	37.0	37.0	53.0	69.9	65.0	68.0	69.0	67.0	67.0
Rolled oats.....	5lbs.	21.5	21.5	24.5	26.0	24.0	24.0	27.0	31.4	35.0	40.5	40.0	37.0	39.5
Rice, medium.....	2lbs.	12.0	11.6	12.2	12.0	12.0	13.4	13.6	16.8	19.6	23.2	25.2	24.6	29.0
Beans.....	2lbs.	11.8	11.8	13.2	14.8	17.2	19.4	24.4	31.5	33.4	34.2	30.2	22.6	23.0
Apples, evaporated.....	1lb.	12.4	13.1	12.1	11.9	12.5	13.4	14.6	15.8	19.7	22.9	22.7	24.6	26.6
Prunes.....	1lb.	12.2	12.4	12.9	13.0	12.7	13.1	13.6	15.5	17.3	18.0	19.6	22.0	25.2
Sugar, granulated.....	4lbs.	22.8	22.0	30.8	32.0	31.2	38.4	36.8	39.5	42.8	43.6	49.2	47.2	53.2
Sugar, yellow.....	2lbs.	10.2	10.2	14.0	14.6	14.4	17.6	17.0	18.3	19.8	20.4	22.4	22.2	25.2
Tea, black.....	1 lb.	9.1	9.1	9.6	9.5	9.7	9.9	10.1	11.6	12.5	14.6	15.9	15.4	15.9
Tea, green.....	1 lb.	9.3	9.3	9.6	9.8	10.0	10.3	10.1	11.3	12.1	14.1	15.3	15.6	16.5
Coffee.....	1 lb.	9.5	9.4	9.9	9.9	9.8	10.0	9.9	10.1	10.1	11.2	11.8	13.4	14.3
Potatoes.....	1 bag	37.5	50.3	31.7	29.3	47.0	58.6	64.7	118.2	72.7	66.0	62.3	62.7	86.7
Vinegar.....	1 qt.	.8	.7	.8	.8	.8	.8	.8	.8	.8	.9	.9	1.0	.9
All foods.....		\$7.73	\$7.42	\$7.97	\$7.74	\$8.28	\$8.46	\$10.27	\$11.62	\$12.42	\$13.00	\$13.78	\$13.77	\$14.73
Coal, anthracite.....	1 ton	Cts. 54.1	Cts. 53.2	Cts. 54.1	Cts. 52.1	Cts. 53.2	Cts. 54.7	Cts. 64.0	Cts. 63.2	Cts. 72.4	Cts. 73.8	Cts. 82.5	Cts. 71.9	Cts. 83.1
Coal, bituminous.....	1 ton	37.1	38.0	38.0	35.8	36.9	38.0	47.7	57.8	55.9	58.7	63.4	61.8	64.0
Wood, hard.....	1 ton	42.9	42.5	42.4	41.7	41.6	41.9	45.7	52.0	63.7	69.2	76.8	74.7	80.0
Wood, soft.....	1 ton	32.1	31.8	31.3	30.6	30.7	30.2	32.7	39.7	47.2	50.8	56.5	57.8	60.0
Coal oil.....	1 gal.	23.9	23.5	23.7	23.4	23.0	22.8	23.2	25.6	25.8	27.8	28.2	28.9	29.6
Fuel and lighting.....		\$1.90	\$1.89	\$1.90	\$1.84	\$1.85	\$1.87	\$2.13	\$2.38	\$2.65	\$2.80	\$3.07	\$2.95	\$3.17
Rent.....	1 mo	4.83	4.83	4.37	4.09	3.98	4.04	4.05	4.37	4.50	4.81	4.83	5.25	5.54
Total.....		14.49	14.17	14.27	13.70	14.14	14.41	16.49	18.41	19.61	20.66	21.74	22.02	23.49

Cost of Living in Paris in January, 1920, Compared with 1914 and April, 1919.

THE Economist (London) for January 10, 1920, publishes a table, received from its Paris correspondent, showing changes in the cost of living in that city in January, 1920, as compared with the year 1914 and April, 1919. Prices are given in francs, conversions into United States money not being made because of the constantly fluctuating value of the franc. Normally the par value of the franc is 19.3 cents. Only the food and clothing items of the original table are presented.

CHANGES IN COST OF LIVING IN PARIS, JANUARY, 1920, COMPARED WITH 1914 AND APRIL, 1919.

Item.	Unit.	1914.	April, 1919.	January, 1920.
		<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>
Food:				
Potatoes.....	Kilo ¹	0.15	0.65	0.75
Milk.....	Liter ²	.40	.80	.95
Eggs.....	Each.....	.15	.45	.80
Coffee.....	Kilo ¹	4.00	10.00	11.00
Butter.....	Pound.....	1.90	8.50	8.80
Ham.....	do.....	2.00	10.00	12.00
Rice.....	do.....	.60	.75	1.70
Salt.....	do.....	.10	.25	.50
Bread.....	Kilo ¹	.35	.50	.90
Sugar.....	do.....	.65	2.10	3.20
Clothing:				
Men's suits.....	.....	25.00	200.00	450.00
Women's tailor-made suits.....	.....	175.00	400.00	700.00
Men's boots.....	.....	25.00 to 40.00	60.00 to 90.00	70.00 to 140.00
Women's boots.....	.....	28.00 to 45.00	70.00 to 100.00	80.00 to 175.00
Men's socks (thread).....	.....	2.75	7.00	16.00
Men's silk hats.....	.....	20.00	60.00	100.00
Men's felt hats.....	.....	18.00	40.00	60.00

¹ A kilo is equivalent to 2.205 pounds.

² A liter is equivalent to 1.057 quarts.

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase over July, 1914, in the cost of food and general family expenditure for February of each year, 1915 to 1920, and for each month in 1919. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or frozen; bacon; fish; flour; bread; tea; sugar; milk; butter, fresh and salt; cheese; margarine; eggs; and potatoes.

The table gives percentage of increase, and is not one of relative prices, as is the table given for the United States. When making comparisons this should be borne in mind, and to obtain the relative prices it is necessary to add 100 to the percentage as given, e. g., for January, 1919, the increase in cost of food is 130 per cent, the relative price being 230.

The figures represent two comparisons: First, the increase in prices, based on the same kinds and quantities as used in July, 1914; second, the increase, based on the change in the standard of living, resulting from a substitution of one kind of food for another to meet war-time conditions.

The table shows that retail prices of food were 135 per cent higher in February, 1920, than in July, 1914, and that the increased cost of all items in the family budget was 130 per cent. On account of the lower standard of living at the later date the expenditures of wage earners for food increased only 112 per cent and for all items in the family budget 115 per cent during the same period.

PER CENT INCREASE IN COST OF FOOD AND ALL ITEMS IN FAMILY BUDGET IN GREAT BRITAIN BASED ON JULY, 1914.

[Compiled from the British Labor Gazette.]

Year and month.	Food.		All items in family budget.	
	Retail prices (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in con- sumption).	Cost (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in con- sumption).
February, 1915.....	22			
February, 1916.....	47			
February, 1917.....	89	1 50	2 60-65	
February, 1918.....	108	54	3 90	55-60
1919.				
January.....	130	79	4 120	90
February.....	130	77	4 120	90-95
March.....	120	79	4 115	90
April.....	113	87	4 110	95
May.....	107	81	4 105	90
June.....	104	87	4 105	95
July.....	109	97	105-110	100
August.....	117	103	115	110
September.....	116	103	115	105
October.....	122	113	120	110-115
November.....	131	119	125	115-120
December.....	134	116	125	110-115
1920.				
January.....	136	115	125	115
February.....	135	112	130	115

¹ Approximate increase if standard of consumption is changed as follows: Eggs omitted; margarine substituted for butter; sugar and fish consumption cut one-half.

² Not including taxes.

³ Including taxes.

⁴ The increase, excluding additional taxation, is 7 per cent less.

⁵ The increase, excluding additional taxation, is 6 per cent less.

Cost of Living in South Africa, 1910 to September, 1919.¹

A SUPPLEMENT to the half-yearly abstract of statistics issued by the Office of Census and Statistics of the Union of South Africa in June, 1919, contains a table of index numbers showing the changes in the cost of living from 1910 to September, 1919, the former year being taken as the base, or 1,000. These index

¹ Union of South Africa. Office of Census and Statistics. Supplement to half-yearly Abstract of union statistics. No. 1, June, 1919. Pretoria, October, 1919. 7 pp.

numbers represent weighted averages for nine cities, namely, Bloemfontein, Cape Town, Durban, East London, Johannesburg, Kimberley, Pietermaritzburg, Port Elizabeth, and Pretoria, and cover the items of food, fuel, light, and rent.

Index Numbers of Cost of Living in Nine Cities in the Union of South Africa, by years 1910 to 1918, and January to September, 1919.

1910.....	1,000	1919:	
1911.....	1,036	January.....	1,331
1912.....	1,065	February.....	1,339
1913.....	1,077	March.....	1,347
1914.....	1,089	April.....	1,359
1915.....	1,105	May.....	1,355
1916.....	1,153	June.....	1,363
1917.....	1,250	July.....	1,359
1918.....	1,300	August.....	1,407
		September.....	1,411

Retail Prices of Food in Czecho-Slovakia, April, 1914, and December, 1919.

A TABLE recently published by a Prague daily paper¹ contains comparative data as to official retail prices in April, 1914, and December, 1919, of a number of important foodstuffs. The increase of the prices ruling in December, 1919, over those of April, 1914, is enormous, varying between 345 per cent in the case of sugar and 2,285 per cent in that of potatoes. These large increases are, of course, due not only to the prevailing shortage of food but chiefly to the great depreciation of the crown. The table is reproduced below.

RETAIL FOOD PRICES IN PRAGUE, APRIL, 1914, AND DECEMBER, 1919.

Article.	Unit.	Retail price.		
		April, 1914.	December, 1919.	Relative price.
		<i>Crowns.</i> ²	<i>Crowns</i> ²	
Beef.....	Kilo.....	1.85	20.00	1,081
Pork.....	do.....	2.06	28.00	1,359
Lard.....	do.....	2.04	37.00	1,813
Eggs.....	Each.....	.10	2.00	2,000
Butter.....	Kilo.....	3.87	50.00	1,291
Rice.....	do.....	.67	5.00	746
Geese.....	do.....	2.50	26.00	1,040
Potatoes.....	do.....	.07	1.60	2,285
Sugar.....	do.....	.83	2.87	345
Coffee, roasted.....	do.....	3.20	38.00 to 40.00	1,187 to 1,250
Milk.....	Liter.....	.30	2.60	866
Tea.....	Kilo.....	8.00	120.00	1,500
Beer.....	½ liter.....	.35	1.60	457

¹ Prager Tagblatt. Prague, Dec. 24, 1919.

² Owing to present fluctuations in the value of the crown, conversions are not made into United States money. Normally, the par value of a crown equals 20.3 cents.

WAGES AND HOURS OF LABOR.

Wages and Hours of Labor in the Cigar and the Men's Clothing Industries.

AS A part of the industrial survey of 1919 wage data were gathered concerning employees engaged in the manufacture of cigars and of men's clothing. A summary presentation of the results of the investigation of these two industries is contained in the tables included in this article.

The statistics relating to the cigar industry were obtained from establishments making cigars classed for revenue purposes as full size. Figures are not included from factories making cigarettes, little cigars, stogies, or tobies. The material for the report on the men's clothing industry was obtained from establishments making men's outer garments, coats, pants, vests, and overcoats for the trade; in other words, what is commonly known as men's ready-made clothing.

The manufacture of ready-made clothing is distinctly an urban industry, and is very largely concentrated in a few cities. The manufacture of cigars, while much more widely distributed than that of men's clothing, is still preeminently urban. Because of this peculiarity of the two industries data concerning them, unlike that of the other industries included in the survey, are presented by cities and not by States. The cities covered by the survey of each industry, and the number of establishments and the number of employees included in each city, are shown in the following table:

TABLE 1.—NUMBER OF ESTABLISHMENTS AND NUMBER OF EMPLOYEES IN THE CIGAR AND MEN'S CLOTHING INDUSTRIES, BY CITIES.

Cities.	Cigars.		Men's clothing.	
	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.
Allentown, Pa.	3	473		
Baltimore, Md.	5	530	4	2,340
Binghamton, N. Y.	4	967		
Boston, Mass.	3	614	16	808
Buffalo, N. Y.			11	479
Chicago, Ill.	5	663	7	6,400
Cincinnati, Ohio.	4	560	26	1,272
Cleveland, Ohio.	4	569	6	443
Dayton, Ohio.	4	497		
Detroit, Mich.	6	1,078		
Evansville, Ind.	3	1,707		
Indianapolis, Ind.			2	630
Key West, Fla.	4	1,060		
Lancaster, Pa.	3	271		
Newark, N. J.	2	135	11	324
New York, N. Y.	11	3,387	21	2,094
Philadelphia, Pa.	7	1,690	15	1,424
Reading, Pa.	4	684		
Rochester, N. Y.			10	2,566
St. Louis, Mo.			5	473
Tampa, Fla.	6	1,830		
Total.	78	16,715	134	19,253

It was not possible to arrange the survey in such a way as to obtain the records of all establishments in an industry for the same pay-roll period. Industry was in a very unsettled state during the progress of the survey. Conditions changed so rapidly that the exact date of the material presented is a matter of more importance than it would be in a normal year. The pay-roll periods included in each industry were distributed by months as shown in the following table:

TABLE 2.—NUMBER OF PAY-ROLL PERIODS IN SPECIFIED MONTHS, 1918 AND 1919.

Industry.	Total number of pay-roll periods.	Number of pay-roll periods in—									
		1918.					1919.				
		Aug- ust.	Sep- tem- ber.	Octo- ber.	No- vem- ber.	De- cem- ber.	Janu- ary.	Feb- ruary.	March.	April.	May.
Cigars.....	78					6	2	21	18	14	17
Men's clothing.....	134	1	5	2	3	22	33	48	20		

It will be seen from the table that in the cigar industry 70 of the 78 pay-roll periods fell within the four months of February, March, April, and May; while in the men's clothing industry 123 of the 134 pay-roll periods fell within the months of December, January, February, and March. Information is presented as of the year 1919. In neither of the industries, so far as could be ascertained, were there any changes in rates of wages during the progress of the survey.

The information concerning hours and earnings on which the tables are based was obtained directly from the pay rolls or other records of the companies by agents of the Bureau. Other information was obtained from responsible officials in personal interviews. Wherever the records of the company failed to indicate the time actually worked by pieceworkers during the selected pay-roll period, arrangements were made to have such a record kept for a future period, from which record data were afterwards copied. In all cases the figures copied by the agents represented the hours actually worked and earnings actually received.

As the material comes in to the office the figures for hours and those for earnings are both in incommensurable form on account of inequalities in the length of pay-roll periods and in the time worked by different individual employees. Before they can be presented in tabular form it is necessary to reduce both hours and earnings to a common denominator. The comparable figures selected for use in the following tables are hours worked per day and per week, and earnings per hour and per week. These figures are obtained in the following manner:

The hours per day of each employee are obtained by dividing the number of hours worked by him during the pay-roll period by the number of week days, holidays omitted, in the pay-roll period. Thus in the case of pay rolls for a single week containing no holidays,

the hours worked by each employee during the pay-roll period are divided by six, whether the employee worked on each of the six days or not. The resulting figure represents the number of hours per day that the employee would have worked if his time had been distributed uniformly among the week days of the pay-roll period.

All the schedules used in making up the following tables were for pay-roll periods one week in length. It was therefore possible to obtain the average hours actually worked per week by the employees in any occupation by dividing the sum of the hours worked by all the employees in the occupation by the number of employees.

By full-time hours per week is meant the number of hours that is thought of in the occupation as constituting a normal week's work, the number of hours the employee regularly expects to work and the employer expects him to work. This figure was obtained from the officials of the various establishments by agents of the Bureau. The difference between full-time hours per week and average hours actually worked per week is an indication of the degree of irregularity of employment among the employees to whom the figures apply.

For comparative purposes the earnings of each employee are reduced to the form of average earnings per hour by dividing his total earnings for the pay-roll period by the total number of hours worked by him during the period. The resulting figure indicates how much he would have earned each hour he worked if his earnings had been distributed uniformly over all the hours actually worked by him during the period.

The average weekly earnings for any occupation are obtained by dividing the aggregate weekly earnings of all employees in the occupation by the number of employees engaged in it. These average actual earnings per week in each occupation, computed as described above, are brought into comparison in the tables with average full-time weekly earnings in the same occupation. In a general way the ratio of full-time earnings to actual earnings might be expected to be identical with the ratio of full-time hours to actual hours. As a matter of fact, however, these ratios may vary to a considerable extent. Actual earnings per week include the week's share of all extra pay for overtime and of all premiums and bonuses. Full-time earnings, on the other hand, represent what an employee can earn by working exactly the normal full-time hours of the establishment. The factor of extra pay for overtime, included in computing actual weekly earnings, was in general eliminated in computing full-time earnings. In those instances, however, which were comparatively rare in these industries, in which the normal working day consisted of a certain number of hours at a basic rate, and an additional hour or two at an increased rate, the extra pay for such additional hour was included in the full-time earnings. Each bonus had to be considered separately.

Those that could be earned in regular time, as, for example, bonuses for regularity of attendance, were included; those that could be earned only by working overtime were excluded; while those earned partly in regular time and partly in overtime, as indicated by the relative amount of overtime work performed, were distributed accordingly. The result of eliminating these factors of extra pay for overtime and bonus is to reduce the ratio of full-time earnings to actual earnings somewhat below the ratio of full-time hours to actual hours.

In many cigar factories the hours of work are very irregular, the employees coming and going as they please. In such factories there is no such thing as generally recognized "full-time hours." For that reason it has not been practicable to present figures for full-time hours per week or full-time weekly earnings in the cigar industry.

In the detailed tables which follow it has been necessary to omit a number of occupations owing to limitations of space. Out of a total of 12 occupations for which data were obtained in the cigar industry 10 are included in the tables. In these occupations are found 16,460 employees out of the total of 16,715 included in the survey. The corresponding figures for men's clothing are 10 out of 12 occupations, and 18,589 out of 19,253 employees.

TABLE 3.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS RECEIVED IN THE CIGAR INDUSTRY, BY OCCUPATION, SEX, AND CITY.

Occupation, sex, and city.	Number of establishments.	Number of employees.	Average hours worked.		Average earnings received.	
			During one week.	Per week day.	During one week.	Per hour.
<i>Bunch makers, hand, male.</i>						
Baltimore.....	4	19	51.2	8.5	\$24.26	\$0.475
Binghamton.....	3	6	48.1	8.0	15.94	.343
Chicago.....	4	109	48.5	8.1	30.16	.619
Dayton.....	2	2	37.4	6.2	14.72	.402
Detroit.....	2	15	43.2	7.2	24.51	.564
New York.....	10	144	48.1	8.0	22.53	.469
Reading.....	3	79	49.3	8.2	19.50	.273
Tampa.....	3	162	52.4	8.7	27.96	.536
Total.....	36	557	49.3	8.2	25.92	.456
<i>Casers, male.</i>						
Allentown.....	2	10	55.3	9.2	18.93	.313
Baltimore.....	3	7	56.1	9.4	17.05	.312
Binghamton.....	3	26	52.8	8.8	15.64	.304
Boston.....	3	7	43.2	7.2	17.67	.402
Chicago.....	5	9	50.1	8.3	24.28	.487
Cincinnati.....	4	7	46.3	7.7	15.12	.327
Cleveland.....	3	9	52.4	8.7	20.31	.389
Dayton.....	3	12	55.6	9.3	20.33	.367
Detroit.....	6	10	49.4	8.2	21.40	.444
Evansville.....	2	35	55.5	9.3	13.59	.212
Key West.....	4	9	58.5	9.6	15.56	.267
Lancaster.....	2	4	52.3	8.7	16.56	.317
Newark.....	2	2	66.0	11.0	23.22	.314
New York.....	10	40	50.6	8.4	15.07	.296
Philadelphia.....	5	16	54.6	8.9	16.48	.313
Reading.....	3	7	52.3	8.7	15.63	.298
Tampa.....	6	25	57.9	9.2	18.44	.319
Total.....	66	235	53.4	8.8	16.89	.319

TABLE 3.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS RECEIVED IN THE CIGAR INDUSTRY, BY OCCUPATION, SEX, AND CITY—Continued.

Occupation, sex, and city.	Number of establishments.	Number of employees.	Average hours worked.		Average earnings received.	
			During one week.	Per week day.	During one week.	Per hour.
<i>Cigar makers, male.</i>						
Baltimore.....	3	25	43.1	7.2	\$18.79	\$.437
Boston.....	3	390	36.3	6.1	25.05	.685
Chicago.....	4	155	44.1	7.3	26.55	.584
Cincinnati.....	2	246	40.8	6.5	15.33	.389
Detroit.....	3	48	42.4	7.0	19.97	.474
Key West.....	4	751	49.5	8.3	17.34	.348
Lancaster.....	3	29	48.1	8.0	17.52	.369
New York.....	5	206	42.8	7.2	19.01	.435
Philadelphia.....	2	160	50.3	8.3	19.83	.398
Reading.....	4	126	50.9	8.5	19.42	.383
Tampa.....	6	723	51.1	8.5	17.33	.340
Other cities.....	3	65	41.0	6.8	21.38	.520
Total.....	42	2,934	46.4	7.7	19.17	.424
<i>Packers, male.</i>						
Baltimore.....	3	14	41.7	7.1	20.30	.484
Binghamton.....	4	35	48.2	8.0	20.02	.413
Boston.....	3	36	34.9	5.8	28.26	.815
Chicago.....	5	38	42.4	7.0	30.82	.724
Cincinnati.....	4	35	37.3	6.2	17.10	.459
Cleveland.....	2	3	39.3	6.5	20.44	.521
Dayton.....	2	2	47.5	7.9	22.40	.470
Key West.....	4	29	42.9	7.2	31.31	.705
Lancaster.....	2	7	45.6	7.6	16.87	.364
New York.....	9	111	42.8	7.1	26.32	.627
Philadelphia.....	3	16	45.5	7.6	23.67	.528
Reading.....	4	27	45.4	7.6	18.89	.416
Tampa.....	6	55	47.5	8.1	34.49	.710
Other cities.....	3	3	45.8	7.7	26.84	.589
Total.....	51	411	43.0	7.3	26.07	.608
<i>Rollers, hand, male.</i>						
Baltimore.....	4	32	49.4	8.1	24.99	.506
Binghamton.....	4	47	41.8	7.0	14.59	.345
Chicago.....	4	158	46.8	7.8	25.98	.555
Detroit.....	2	3	45.8	7.6	28.21	.623
Key West.....	2	29	48.4	8.1	17.29	.357
New York.....	10	394	45.1	7.5	21.17	.471
Philadelphia.....	2	11	42.1	7.0	12.63	.312
Tampa.....	3	229	51.6	8.6	22.24	.434
Other cities.....	5	19	47.9	8.0	17.54	.365
Total.....	36	922	47.1	7.9	21.78	.463
<i>Banders, hand, female.</i>						
Allentown.....	2	29	39.4	7.2	10.26	.255
Baltimore.....	5	14	40.9	6.8	11.56	.291
Binghamton.....	3	12	39.8	6.6	8.96	.231
Chicago.....	5	20	47.9	8.0	11.95	.261
Cincinnati.....	2	15	38.0	6.3	7.57	.194
Cleveland.....	3	35	30.7	5.1	8.79	.272
Dayton.....	3	18	32.6	5.5	8.38	.210
Detroit.....	4	43	40.7	6.8	8.86	.220
Evansville.....	2	39	44.1	7.4	8.68	.198
Key West.....	4	43	30.1	4.9	8.41	.272
Lancaster.....	2	10	48.9	8.2	10.34	.213
New York.....	8	39	42.4	7.1	14.48	.339
Philadelphia.....	4	26	45.6	7.6	10.89	.244
Reading.....	2	7	45.8	7.6	12.29	.265
Tampa.....	6	61	40.3	6.7	10.28	.250
Other cities.....	1	3	40.2	6.7	15.67	.391
Total.....	56	414	39.5	6.5	10.07	.254

TABLE 3.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS RECEIVED IN THE CIGAR INDUSTRY, BY OCCUPATION, SEX, AND CITY—Continued.

Occupation, sex, and city.	Number of establishments.	Number of employees.	Average hours worked.		Average earnings received.	
			During one week.	Per week day.	During one week.	Per hour.
<i>Bunch makers, hand, female.</i>						
Baltimore.....	4	91	40.8	6.8	\$16.52	\$0.393
Binghamton.....	4	154	44.0	7.3	16.14	.365
Chicago.....	2	5	47.8	8.0	30.63	.635
Cleveland.....	3	81	43.0	7.2	16.67	.387
Detroit.....	6	224	42.7	7.1	17.91	.418
Evansville.....	3	374	51.3	8.4	13.50	.268
Key West.....	2	24	48.1	8.0	10.61	.217
New York.....	9	571	46.5	8.1	21.83	.452
Philadelphia.....	2	63	38.7	6.5	17.36	.449
Reading.....	3	28	45.7	7.6	17.61	.388
Tampa.....	3	38	52.0	8.7	22.44	.438
Other cities.....	3	68	45.6	7.6	14.49	.316
Total.....	44	1,721	46.9	7.8	17.84	.384
<i>Bunch makers, machine, female.</i>						
Allentown.....	2	99	50.4	8.4	21.63	.430
Cleveland.....	3	42	46.2	7.7	17.29	.374
Dayton.....	3	107	43.9	7.3	14.20	.321
Detroit.....	3	54	44.1	7.4	17.77	.399
New York.....	3	122	44.3	7.4	18.65	.420
Philadelphia.....	4	209	48.5	8.0	17.54	.361
Reading.....	2	18	49.2	8.2	20.43	.413
Other cities.....	5	161	45.2	7.5	15.75	.345
Total.....	25	812	44.6	7.7	17.48	.374
<i>Cigar makers, hand, female.</i>						
Boston.....	3	65	35.5	6.0	19.74	.561
Cleveland.....	4	20	41.4	6.9	17.16	.427
Detroit.....	2	9	42.6	7.1	18.96	.442
Key West.....	2	4	43.2	7.2	12.10	.254
Lancaster.....	2	17	45.5	7.6	15.72	.346
Philadelphia.....	2	36	42.4	7.1	15.94	.376
Reading.....	4	56	45.8	7.6	15.39	.337
Tampa.....	5	81	51.0	8.5	18.22	.360
Other cities.....	5	37	39.5	6.4	18.16	.453
Total.....	29	325	43.5	7.2	19.12	.413
<i>Packers, female.</i>						
Allentown.....	2	36	41.8	7.5	15.57	.375
Baltimore.....	2	28	38.7	6.9	13.65	.351
Binghamton.....	3	32	40.2	6.7	14.76	.370
Cleveland.....	4	36	33.9	5.7	13.92	.410
Dayton.....	3	33	38.3	6.4	14.50	.371
Detroit.....	6	51	39.8	6.6	19.29	.483
Evansville.....	3	97	43.1	7.2	11.43	.268
Lancaster.....	3	16	39.1	6.5	12.71	.326
New York.....	5	59	43.4	7.2	19.75	.457
Philadelphia.....	5	96	43.6	7.2	15.61	.365
Reading.....	2	17	41.0	6.8	16.63	.405
Other cities.....	4	10	34.9	5.8	16.54	.398
Total.....	42	511	41.1	6.9	15.27	.375
<i>Rollers, hand, female.</i>						
Baltimore.....	4	36	45.7	7.6	21.25	.458
Binghamton.....	4	356	44.7	7.5	15.20	.339
Chicago.....	4	47	44.8	7.5	24.10	.539
Cleveland.....	3	52	39.9	6.6	14.28	.357
Dayton.....	2	62	41.3	6.9	13.58	.333
Detroit.....	6	399	42.4	7.1	17.04	.400
Evansville.....	3	761	49.1	8.4	11.44	.232
Lancaster.....	2	18	50.2	8.4	15.41	.309
New York.....	8	779	47.7	8.0	18.94	.398
Philadelphia.....	3	215	37.6	6.3	15.97	.422
Reading.....	2	83	45.7	7.6	19.54	.429
Tampa.....	3	194	55.1	8.3	21.84	.438
Other cities.....	1	64	46.0	7.7	13.02	.282
Total.....	45	3,066	46.3	7.7	18.77	.354

TABLE 3.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS RECEIVED IN THE CIGAR INDUSTRY, BY OCCUPATION, SEX, AND CITY—Concluded.

Occupation, sex, and city.	Number of establishments.	Number of employees.	Average hours worked.		Average earnings received.	
			During one week.	Per week day.	During one week.	Per hour.
<i>Rollers, suction, female.</i>						
Allentown.....	2	203	49.7	8.3	\$20.82	\$0.417
Baltimore.....	2	153	40.7	6.8	14.74	.357
Cleveland.....	2	141	43.6	7.3	15.97	.364
Dayton.....	2	151	42.9	7.1	13.14	.309
Lancaster.....	2	73	44.5	7.4	15.57	.349
New York.....	5	465	47.0	7.9	17.91	.381
Philadelphia.....	3	397	48.6	8.1	16.22	.388
Other cities.....	4	196	44.8	7.5	15.57	.345
Total.....	22	1,779	46.1	7.7	16.57	.359
<i>Stemmers or strippers, hand, female.</i>						
Allentown.....	2	81	47.6	7.9	10.21	.215
Baltimore.....	5	38	44.4	7.4	8.78	.192
Binghamton.....	4	184	42.5	7.1	8.98	.216
Boston.....	2	94	38.6	6.5	11.14	.294
Chicago.....	5	98	44.6	7.4	11.55	.257
Cincinnati.....	3	45	37.9	6.3	6.32	.169
Cleveland.....	4	92	39.6	6.6	9.45	.244
Dayton.....	4	61	47.0	7.8	9.08	.194
Detroit.....	5	153	41.2	6.9	10.56	.256
Evansville.....	3	334	44.2	7.4	6.45	.145
Key West.....	4	157	43.2	7.2	7.83	.183
Lancaster.....	3	12	48.0	8.0	9.38	.199
New York.....	11	348	47.6	7.9	11.05	.233
Philadelphia.....	6	354	42.6	7.1	10.85	.188
Reading.....	4	78	41.7	7.1	10.38	.246
Tampa.....	6	258	49.2	8.2	9.71	.196
Other cities.....	1	5	53.9	9.0	9.12	.167
Total.....	72	2,392	44.3	7.4	9.57	.207
<i>Stemmers or strippers, machine, female.</i>						
Allentown.....	2	15	42.5	7.1	9.82	.220
Baltimore.....	2	24	45.2	7.6	11.38	.253
Binghamton.....	4	34	45.3	7.5	9.82	.221
Boston.....	3	18	39.1	7.4	12.73	.325
Chicago.....	3	4	47.9	8.0	14.20	.298
Cincinnati.....	3	30	41.6	6.9	10.11	.245
Cleveland.....	3	20	44.9	7.5	12.64	.279
Dayton.....	3	26	39.7	6.6	8.95	.215
Detroit.....	5	39	41.7	6.9	11.04	.267
Newark.....	2	6	54.0	9.0	8.65	.163
New York.....	4	34	48.5	8.9	12.56	.259
Philadelphia.....	4	47	47.0	7.6	9.38	.201
Reading.....	3	24	38.7	6.5	10.43	.275
Other cities.....	3	60	45.4	7.6	8.29	.189
Total.....	44	381	44.1	7.4	10.31	.236
All occupations, male.....		5,059	46.9	7.8	20.84	.448
All occupations, female.....		11,401	45.2	7.5	15.54	.325
All occupations, male and female.....		16,460	45.7	7.6	17.17	.363

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN THE MEN'S CLOTHING INDUSTRY, BY OCCUPATION, SEX, AND CITY.

Occupation, sex, and city.	Number of establishments.	Number of employees.	Average hours actually worked.		Full time hours per week.	Average earnings actually made.		Full time earnings per week.
			Per week day.	Per week.		Per hour.	Per week.	
<i>Basters, hand, coats, male.</i>								
Baltimore.....	3	89	7.3	43.9	48.0	\$0.649	\$28.23	\$31.15
Boston.....	7	66	7.1	42.5	45.7	.499	21.28	22.72
Buffalo.....	4	19	7.9	47.2	48.0	.416	19.70	19.95
Chicago.....	5	284	7.2	43.4	48.0	.506	21.99	24.16
Cincinnati.....	3	19	8.1	48.6	50.0	.464	22.12	23.19
Indianapolis.....	2	9	8.4	50.4	48.0	.455	22.84	22.17
Newark.....	5	39	7.3	43.8	45.2	.455	19.84	20.44
New York.....	10	192	7.6	45.3	46.3	.503	22.89	23.27
Philadelphia.....	8	139	7.6	45.5	48.0	.490	22.40	23.42
Rochester.....	4	162	7.7	46.3	48.0	.515	23.86	24.59
St. Louis.....	2	5	6.9	41.4	49.2	.401	17.50	20.01
Other cities.....	1	4	9.0	53.8	53.8	.416	22.50	22.40
Total.....	54	1,027	7.5	44.8	47.5	.511	22.87	24.19
<i>Bushelers and tailors, male.</i>								
Baltimore.....	4	101	8.0	47.9	48.0	.586	27.89	27.77
Boston.....	5	34	7.6	45.3	45.5	.529	23.96	24.07
Buffalo.....	2	5	8.3	50.0	50.0	.280	14.00	14.01
Chicago.....	5	189	7.8	46.7	48.0	.431	20.17	20.46
Cincinnati.....	8	39	8.0	48.0	49.3	.371	17.78	18.25
Cleveland.....	4	12	7.8	47.0	49.0	.468	21.98	22.83
Indianapolis.....	2	33	7.9	47.1	48.0	.470	22.15	22.78
Newark.....	4	14	6.9	41.1	45.3	.534	21.73	23.66
New York.....	12	122	7.8	46.5	46.6	.478	22.19	21.97
Philadelphia.....	8	52	9.5	56.9	52.0	.404	22.47	20.59
Rochester.....	5	63	7.8	46.6	48.0	.501	23.52	23.91
St. Louis.....	2	2	8.2	49.0	49.0	.481	23.50	23.51
Total.....	61	666	7.9	47.6	48.0	.473	22.39	22.42
<i>Cutters, cloth, hand, male.</i>								
Baltimore.....	4	211	6.9	41.3	48.0	.659	27.17	31.59
Boston.....	5	66	6.5	38.7	44.5	.840	31.43	37.01
Buffalo.....	4	31	7.9	47.3	48.0	.505	23.89	24.23
Chicago.....	5	1,456	7.4	44.2	48.0	.593	26.21	28.45
Cincinnati.....	8	103	7.3	43.8	48.3	.552	24.12	26.56
Cleveland.....	3	11	7.1	42.3	48.6	.529	22.36	25.82
Indianapolis.....	2	25	7.2	43.3	48.0	.427	18.62	20.28
Newark.....	3	11	7.8	46.5	46.5	.613	28.45	28.45
New York.....	12	193	7.5	45.2	46.9	.697	31.37	32.55
Philadelphia.....	5	103	6.8	40.6	48.0	.619	25.07	29.72
Rochester.....	4	133	6.9	41.4	48.0	.663	27.26	29.79
St. Louis.....	3	59	8.0	47.8	48.0	.555	26.45	26.64
Total.....	58	1,402	7.2	43.3	47.7	.628	26.98	29.63
<i>Cutters, cloth, machine, male.</i>								
Baltimore.....	3	8	6.7	40.1	48.0	.609	23.87	28.56
Buffalo.....	3	7	8.0	47.9	48.0	.501	23.99	24.06
Chicago.....	3	54	7.3	43.9	48.0	.674	29.26	32.35
Cincinnati.....	6	13	7.4	44.5	48.3	.553	24.51	26.62
Cleveland.....	2	12	8.0	48.1	48.6	.600	31.90	31.50
Newark.....	2	2	7.7	46.0	46.0	.608	28.00	28.00
New York.....	7	18	7.0	42.0	46.7	.755	31.79	35.27
Philadelphia.....	4	28	7.6	45.7	48.0	.583	25.62	27.76
Rochester.....	3	9	6.0	36.2	48.0	.674	23.73	32.34
St. Louis.....	4	22	7.7	45.9	48.3	.564	26.19	27.23
Other cities.....	1	1	8.0	48.0	48.0	.481	23.10	23.09
Total.....	38	174	7.4	44.2	47.9	.632	27.58	30.17
<i>Examiners, male.</i>								
Baltimore.....	3	63	7.7	46.2	48.0	.544	25.38	25.66
Boston.....	8	23	7.5	45.1	45.8	.486	21.96	22.25
Buffalo.....	2	4	8.1	48.8	48.8	.462	22.50	22.50
Chicago.....	5	136	7.6	45.6	48.0	.489	21.88	21.71
Cincinnati.....	9	22	8.1	48.6	49.3	.405	19.74	19.95
Cleveland.....	3	19	7.5	45.1	48.0	.558	25.16	26.74
Indianapolis.....	2	19	8.0	47.9	48.0	.478	23.00	23.29

¹ Including 303 hand or machine cutters.² Including 10 hand or machine cutters.³ Including 313 hand or machine cutters.

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN THE MEN'S CLOTHING INDUSTRY, BY OCCUPATION, SEX, AND CITY—Continued.

Occupation, sex, and city.	Number of establishments.	Number of employees.	Average hours actually worked.		Full time hours per week.	Average earnings actually made.		Full time earnings per week.
			Per week day.	Per week.		Per hour.	Per week.	
<i>Examiners, male—Concluded.</i>								
Newark.....	4	6	7.8	46.7	46.7	\$0.489	\$22.58	\$22.58
New York.....	14	87	8.0	48.1	46.6	.490	23.58	22.70
Philadelphia.....	7	58	7.8	46.5	48.3	.446	20.71	21.39
Rochester.....	6	48	8.0	48.2	48.0	.475	23.06	22.71
St. Louis.....	2	3	8.3	50.0	50.3	.340	16.33	17.07
Total.....	65	488	7.8	46.7	47.8	.487	22.67	22.65
<i>Fitters or trimmers, male.</i>								
Baltimore.....	4	48	7.0	41.8	48.0	.613	25.74	29.36
Boston.....	8	19	7.5	45.0	45.9	.577	25.98	26.40
Buffalo.....	4	4	8.0	47.9	48.5	.500	24.13	23.57
Chicago.....	5	83	7.4	44.5	48.0	.656	28.64	31.25
Cincinnati.....	8	16	7.8	46.6	48.6	.416	19.50	20.12
Cleveland.....	4	5	8.3	49.8	48.0	.565	27.94	27.10
Indianapolis.....	2	5	8.3	49.8	48.0	.440	22.10	21.20
Newark.....	5	7	7.8	46.6	46.6	.571	26.43	26.43
New York.....	18	37	7.3	43.7	46.7	.590	25.72	27.46
Philadelphia.....	9	24	7.6	45.6	48.0	.487	22.08	23.30
Rochester.....	7	40	7.4	44.1	48.0	.504	22.07	24.14
Other cities.....	1	1	8.0	48.0	48.0	.417	20.00	20.00
Total.....	75	289	7.4	44.4	47.7	.576	25.38	27.37
<i>Operators, male.</i>								
Baltimore.....	4	380	7.4	44.6	48.0	.616	27.55	29.61
Boston.....	15	140	7.2	43.0	45.8	.600	26.15	27.28
Buffalo.....	9	56	7.7	46.2	48.2	.530	24.31	25.47
Chicago.....	6	709	7.4	44.2	48.0	.572	25.31	27.29
Cincinnati.....	7	27	8.0	47.7	49.9	.470	22.43	23.57
Cleveland.....	5	21	7.1	42.4	49.8	.500	21.12	25.01
Indianapolis.....	2	20	7.9	47.1	48.0	.527	23.86	24.99
Newark.....	9	58	7.5	45.1	46.7	.576	26.12	26.68
New York.....	17	482	7.4	44.6	46.8	.417	29.56	30.92
Philadelphia.....	14	242	7.8	46.8	48.0	.599	28.07	28.67
Rochester.....	8	188	7.9	47.2	48.0	.553	26.13	26.43
St. Louis.....	5	26	8.0	48.0	50.0	.412	19.94	20.52
Total.....	101	2,349	7.5	44.9	47.7	.545	26.80	28.27
<i>Pressers, hand, male.</i>								
Baltimore.....	4	148	7.5	45.0	48.0	.593	26.83	28.20
Boston.....	12	58	6.9	41.1	45.2	.623	25.77	28.18
Buffalo.....	7	41	7.5	44.8	48.0	.552	24.68	26.44
Chicago.....	6	539	7.2	42.9	48.0	.617	26.36	29.58
Cincinnati.....	20	123	7.9	47.5	49.0	.390	18.54	19.10
Cleveland.....	4	17	7.8	46.5	49.7	.550	25.21	27.21
Indianapolis.....	2	60	7.8	46.6	48.0	.458	21.35	22.01
Newark.....	9	43	7.3	43.8	46.8	.588	25.48	27.17
New York.....	18	225	7.7	46.1	46.5	.538	24.86	24.96
Philadelphia.....	11	111	7.8	46.5	48.3	.497	23.27	23.87
Rochester.....	9	256	7.4	44.5	48.0	.523	23.30	25.06
St. Louis.....	2	3	5.9	35.6	48.7	.437	15.05	21.26
Total.....	104	1,624	7.4	44.6	47.8	.555	24.60	26.40
<i>Pressers, machine, male.</i>								
Baltimore.....	3	170	7.5	44.8	48.0	.643	28.48	30.79
Boston.....	10	64	7.1	42.5	45.9	.510	21.85	23.51
Buffalo.....	10	42	7.9	47.4	48.3	.415	20.25	20.01
Chicago.....	5	408	7.4	44.3	48.0	.559	24.40	26.60
Cincinnati.....	16	65	8.0	47.8	49.3	.391	18.52	19.32
Cleveland.....	4	31	7.1	42.7	48.0	.559	24.27	26.62
Indianapolis.....	2	33	7.5	45.0	48.0	.353	16.02	16.90
Newark.....	4	27	7.4	44.1	45.3	.563	24.71	24.94
New York.....	13	103	7.7	46.0	46.7	.562	25.96	26.18
Philadelphia.....	8	98	7.5	45.2	48.0	.501	22.92	24.01
Rochester.....	8	229	7.8	47.0	48.0	.505	23.62	24.15
St. Louis.....	5	38	7.9	47.2	50.2	.391	18.54	19.63
Total.....	88	1,308	7.6	45.3	47.9	.531	23.88	25.28

TABLE 4.—AVERAGE ACTUAL AND FULL-TIME HOURS AND EARNINGS IN THE MEN'S CLOTHING INDUSTRY, BY OCCUPATION, SEX, AND CITY—Concluded.

Occupation, sex, and city.	Number of establishments.	Number of employees.	Average hours actually worked.		Full time hours per week.	Average earnings actually made.		Full time earnings per week.
			Per week day.	Per week.		Per hour.	Per week.	
<i>Basters, hand, female.</i>								
Baltimore.....	4	115	7.1	42.7	48.0	\$0.372	\$15.84	\$17.74
Boston.....	15	57	7.3	43.6	45.5	.312	13.60	14.17
Buffalo.....	5	40	7.7	46.1	48.0	.323	14.83	15.51
Chicago.....	5	417	7.4	44.2	48.0	.389	17.18	18.61
Cincinnati.....	12	63	7.4	44.5	49.4	.261	11.63	12.92
Cleveland.....	3	19	7.2	43.2	48.1	.332	15.28	15.93
Indianapolis.....	2	58	7.6	45.5	48.0	.301	13.65	14.47
Newark.....	8	33	7.6	45.7	46.7	.326	14.89	14.99
New York.....	15	61	7.7	46.1	47.5	.329	15.30	15.56
Philadelphia.....	11	94	7.3	43.9	48.1	.287	12.73	13.79
Rochester.....	9	237	7.3	43.8	48.0	.325	14.33	15.60
Other cities.....	1	1	7.7	46.0	48.0	.336	15.45	16.13
Total.....	90	1,195	7.4	44.2	47.9	.344	15.23	16.43
<i>Examiners, female.</i>								
Baltimore.....	3	17	7.3	43.5	48.0	.295	14.30	13.56
Chicago.....	3	45	6.9	41.2	48.0	.374	15.56	16.05
Cincinnati.....	4	5	8.6	51.6	50.0	.248	12.75	12.40
Cleveland.....	2	10	7.8	47.0	48.0	.385	18.04	18.50
New York.....	3	6	8.6	51.6	47.7	.290	14.83	13.82
Philadelphia.....	2	9	6.6	39.4	48.0	.272	10.45	13.13
Rochester.....	5	9	7.9	47.4	48.0	.352	16.64	16.87
St. Louis.....	2	19	7.8	46.5	50.3	.214	9.84	10.74
Other cities.....	1	2	8.2	49.3	48.0	.388	19.25	19.25
Total.....	25	122	7.4	44.2	48.4	.321	14.23	14.71
<i>Hand sewers, female.</i>								
Baltimore.....	4	454	7.0	42.0	48.0	.386	16.16	18.42
Boston.....	14	175	7.2	43.0	45.8	.314	13.37	14.34
Buffalo.....	11	105	7.5	45.1	48.2	.259	11.61	12.47
Chicago.....	6	1,418	7.2	43.3	48.0	.349	15.20	14.99
Cincinnati.....	22	301	7.4	44.6	49.1	.239	10.64	11.72
Cleveland.....	8	60	7.0	41.7	48.1	.310	13.09	14.92
Indianapolis.....	2	179	7.2	43.2	48.0	.215	10.55	11.75
Newark.....	9	43	7.6	45.6	46.7	.306	13.89	14.15
New York.....	18	368	7.4	44.6	46.6	.341	15.13	15.83
Philadelphia.....	15	227	7.5	44.9	48.1	.286	12.65	13.68
Rochester.....	10	566	7.5	44.7	48.0	.324	14.51	15.46
St. Louis.....	4	48	7.0	41.9	50.1	.211	8.87	10.52
Total.....	121	3,944	7.3	43.7	47.9	.326	14.20	14.90
<i>Operators, female.</i>								
Baltimore.....	4	423	7.2	43.4	48.0	.383	16.51	18.09
Boston.....	11	45	7.1	42.6	46.0	.361	15.05	16.56
Buffalo.....	10	106	7.4	44.6	48.1	.282	12.63	13.55
Chicago.....	6	1,469	7.2	43.3	48.0	.392	17.00	18.73
Cincinnati.....	25	430	7.4	44.3	49.0	.246	10.47	12.04
Cleveland.....	7	195	6.8	41.0	48.1	.385	15.74	18.55
Indianapolis.....	2	146	6.9	41.5	48.0	.303	12.61	14.55
Newark.....	7	32	7.2	43.4	46.5	.337	14.49	15.47
New York.....	13	154	7.4	44.1	46.8	.377	16.52	17.57
Philadelphia.....	9	207	7.3	44.0	48.0	.326	14.20	15.65
Rochester.....	10	560	7.5	44.8	48.0	.363	16.17	17.40
St. Louis.....	5	234	7.8	46.7	50.1	.265	12.52	13.20
Total.....	109	4,001	7.3	43.8	48.1	.353	15.32	16.88

The last previous investigation of the cigar industry made by the Bureau was carried out in 1913; for the men's clothing industry the date was 1914. Table 5 gives relative hourly earnings for a number of selected occupations in the cigar industry, and Table 6 gives relative full-time hours, hourly earnings, and full-time earnings for the men's clothing industry. For reasons already stated it is impracticable to compute full-time hours or full-time earnings for the cigar industry. The figures for 1913 are in all cases used as the base. The comparison is necessarily confined to those occupations for which the requisite information in comparable form is at hand. The table also gives a relative for each industry as a whole. It seems desirable to point out certain features of the method by which the latter relatives were computed. In the first place the averages of hours and earnings on which the 1919 relative is based covered only selected occupations. In earlier years the relatives have been based on all wage-earning employees found in the establishments visited. Those employees who did not fall within any of the selected occupations were grouped in the tables under the caption "other employees." This was done not because of any value that was supposed to attach to figures for this heterogeneous group, but because it was feared that the omission of these employees might seriously affect the averages for the industry as a whole. Careful experiments carried out by the Bureau indicate that, if the selected occupations include low-paid groups, such as laborers, in proportion to their numbers in the industry, the omission of "other employees" has little effect upon industry averages.

In the second place it should be stated that the industry averages given in the table are based on all of the occupations listed in the several industries and not on those to which limitations of space made it necessary to confine the detailed tables already presented. The total number of selected occupations used in computing the industry relative was eight in the cigar industry and eight in the men's clothing industry.

In the third place the effect of bonuses and of extra pay for overtime in increasing hourly earnings has been carefully noted and every effort has been put forth to make the full-time weekly earnings represent exactly what the employees would earn by working the full-time hours of the occupation and no more. For that purpose not only has the extra pay for overtime been eliminated but also every bonus which it required overtime work to secure. On the other hand, attendance bonuses and others which could be earned in regular time have been included in the hourly rates from which full-time earnings were computed.

Finally no attempt has been made to base the relatives on data from identical establishments. With the changes that the lapse of time since the last investigation has brought about in the different establishments the plan of confining the comparison to data from identical establishments would have two disadvantages. It would in some cases seriously limit the numbers on which the comparative figures are based; in other cases it might give undue weight to changes in hours and earnings taking place in one or another of the limited number of establishments covered, when those changes did not reflect conditions in the industry as a whole. The present relatives are based on the entire body of information available for each year for which a relative is shown.

TABLE 5.—AVERAGE AND RELATIVE HOURLY EARNINGS IN THE CIGAR INDUSTRY, BY OCCUPATION, SEX, AND YEAR.

Sex and occupation.	Year.	Average earnings per hour.	Relative earnings per hour.
<i>Males.</i>			
Bunch makers, hand.....	1913	\$0.303	100
	1919	.469	160
Cigar makers, hand.....	1913	.316	100
	1919	.424	134
Packers.....	1913	.477	100
	1919	.608	127
Rollers, hand.....	1913	.301	100
	1919	.463	154
Stemmers or strippers, hand.....	1913	.153	100
	1919	.219	143
<i>Females.</i>			
Banders, hand.....	1913	.161	100
	1919	.254	158
Bunch makers, hand.....	1913	.234	100
	1919	.384	164
Bunch makers, machine.....	1913	.203	100
	1919	.374	184
Cigar makers, hand.....	1913	.256	100
	1919	.413	161
Packers.....	1913	.226	100
	1919	.375	166
Rollers, hand.....	1913	.230	100
	1919	.354	154
Rollers, suction.....	1913	.186	100
	1919	.359	193
Stemmers or strippers, hand.....	1913	.128	100
	1919	.207	162
All occupations.....	1913	.237	100
	1919	.363	153

TABLE 6.—AVERAGE AND RELATIVE FULL-TIME HOURS PER WEEK, HOURLY EARNINGS, AND FULL-TIME EARNINGS PER WEEK IN THE MEN'S CLOTHING INDUSTRY, BY OCCUPATION, SEX, AND YEAR.

Occupation, sex, and year.	Average.			Relative.		
	Full-time hours per week.	Hourly earnings.	Full-time weekly earnings.	Full-time hours per week.	Hourly earnings.	Full-time weekly earnings.
Basters, coat, male:						
1913.....	52.5	\$0.267	\$14.00	100	100	100
1914.....	52.1	.257	13.33	99	96	95
1919.....	47.5	.511	24.19	90	191	173
Bushebers and tailors, male:						
1913.....	52.2	.273	14.23	100	100	100
1914.....	51.6	.282	14.56	99	103	102
1919.....	48.0	.473	22.42	92	173	158
Cutters, cloth, hand, male:						
1913.....	49.0	.432	21.08	100	100	100
1914.....	48.6	.446	21.66	99	103	103
1919.....	47.7	.628	29.63	97	145	141
Cutters, cloth, machine, male:						
1913.....	49.3	.451	22.19	100	100	100
1914.....	48.4	.470	22.74	98	104	102
1919.....	47.9	.632	30.17	97	140	136
Examiners, male:						
1913.....	51.8	.303	15.63	100	100	100
1914.....	51.2	.317	16.18	99	105	104
1919.....	47.8	.487	22.65	92	161	145
Fitters or trimmers, coat, male:						
1913.....	52.2	.348	18.15	100	100	100
1914.....	51.7	.332	17.13	99	95	94
1919.....	47.7	.575	27.24	91	165	150
Sewers, hand, coat, male:						
1913.....	52.2	.256	13.34	100	100	100
1914.....	52.1	.270	14.04	100	105	105
1919.....	47.8	.446	21.05	92	174	158
Operators, male:						
1913.....	52.5	.312	16.33	100	100	100
1914.....	52.1	.316	16.44	99	101	101
1919.....	47.7	.545	28.27	91	175	173
Pressers, hand, male:						
1913.....	52.3	.298	15.55	100	100	100
1914.....	51.9	.292	15.15	99	98	97
1919.....	47.8	.555	26.40	91	186	170
Shapers, coat, male:						
1913.....	52.4	.342	17.91	100	100	100
1914.....	51.9	.343	17.74	99	100	99
1919.....	47.8	.577	27.41	91	169	152
Basters, hand, female:						
1913.....	52.5	.184	9.66	100	100	100
1914.....	51.9	.189	9.81	99	103	102
1919.....	47.9	.344	16.43	91	187	170
Sewers, hand, female:						
1913.....	52.2	.177	9.23	100	100	100
1914.....	51.7	.173	8.91	99	98	97
1919.....	47.9	.326	14.90	92	184	161
Operators, female:						
1913.....	52.2	.204	10.62	100	100	100
1914.....	51.7	.214	11.10	99	105	105
1919.....	48.1	.353	16.88	92	173	159
All occupations:						
1913.....	52.0	.264	13.63	100	100	100
1914.....	51.5	.265	13.56	99	100	99
1919.....	47.9	.449	21.24	92	170	156

The industrial survey covered eight industries for which the Bureau had material on hand for the calculation of industry relatives. That the increases in earnings in the industries included in this report may be compared with increases in the other six industries, the relatives of each industry are given in the following table:

TABLE 7.—RELATIVE EARNINGS PER HOUR IN EIGHT INDUSTRIES: 1914, 1915 AND 1919 COMPARED WITH 1913.

[1913=100.]

Year.	Cigars.	Clothing, men's.	Furni- ture.	Hosiery and un- derwear.	Iron and steel.	Lumber.	Mill- work.	Silk goods.
1913.....	100	100	100	100	100	100	100	100
1914.....	(1)	(1)	(1)	103	103	(1)	(1)	100
1915.....	(1)	(1)	103	(1)	101	91	99	(1)
1919.....	152	171	154	184	221	194	151	191

¹ Not reported.

An examination of the table shows that in the spring of 1919, at which time the survey was carried out, employees in the cigar-making industry had received increases over the 1913 level of earnings amounting on the average to 52 per cent; at the same date the increase in the men's clothing industry amounted to 71 per cent. Over against this should be set the increase in the cost of living during the same period. According to the careful estimates made by the Bureau this had amounted to 75 per cent in the spring of 1919 as compared with the 1913 level. It will be noticed that only employees in the millwork industry had received a lower rate of increase during the period under consideration than the cigar employees had received, while the increase in the men's clothing industry had followed very closely the increase in the cost of living.

Hours of Labor of Hotel and Restaurant Employees.

By DOROTHY POPE.

AN ARTICLE on wages and hours of hotel and restaurant employees, in the MONTHLY LABOR REVIEW for September, 1919 (pp. 190-217), outlined the general scope of the investigation of this industry made by the Bureau in 1919 in 26 large cities of the country, and presented the daily rates of wages received by these employees. The number of days in the working week, the full-time weekly hours, and the arrangement of the daily hours of work prevailing in the industry are dealt with in this article.

Days in the Working Week.

ALL hotels and the majority of restaurants operate at least 13 hours a day every day throughout the year. Because they serve the public they can not close their doors at their own convenience on one day a week, and if they are to give employees one day of rest in seven, schedules of work must be so arranged that the absence of employees will not interfere with the service rendered the public. Many hotels and restaurants have accomplished this by maintaining relief employees for each occupation or group of small related occupations; but many others still arrange a seven-day working schedule for all or part of their employees. Nearly half the men and over half the women in hotels and about one-third of the men and one-fourth of the women in restaurants included in the survey work seven days a week. Some hotels in the transitional stage between a seven and a six day working week allow certain classes of employees a day off every two weeks or a half day off every week. The following table shows, by occupation, the percentage of hotel and restaurant employees who are entitled to be off duty each specified number of days.

TABLE 1.—PER CENT OF HOTEL AND RESTAURANT EMPLOYEES ENTITLED TO EACH SPECIFIED NUMBER OF DAYS OFF DUTY, BY OCCUPATION.

Occupation.	Sex.	Hotels.				Restaurants. ¹			
		Per cent of employees whose days off are—				Per cent of employees whose days off are—			
		Number of establishments.	None.	1 a week or 4 a month, with pay.	1 a week, without pay.	1 every 2 weeks, or 2 a month, or 1 a week, with pay.	Occasional, with pay.	Number of employees.	None.
Bell boys.....	M.	147	85	5	.....	9	1	.....	.....
Buses.....	F.	6	7	93	.....	11	(2)	152	35
Butchers and oyster men.....	M.	116	40	43	6	.....	.....	888	42
Butchers.....	F.	24	49	48	4	.....	.....	70	62
Checkers.....	M.	74	21	63	5	6	4	125	29
Cleaners.....	F.	4	60	40	.....	.....	.....	62	27
Cooks.....	M.	128	46	46	.....	8	.....	62	23
Cooks.....	F.	38	41	48	.....	10	1	28	29
Cooks.....	M.	82	66	19	.....	13	(2)	68	44
Cooks.....	F.	97	64	28	2	5	1	186	3
Cooks.....	M.	1,001	72	72	7	2	(2)	62	28
Cooks.....	F.	1,881	49	45	2	4	.....	1,481	14
Dishwashers.....	M.	55	49	45	2	13	9	82	22
Dishwashers.....	F.	1,664	53	24	1	8	.....	178	45
Door men.....	M.	106	937	34	4	.....	.....	716	31
Housekeepers.....	F.	52	71	2	.....	27	.....	788	40
Housekeepers.....	M.	1	100	.....	.....	.....	.....	5	.....
Housekeepers.....	F.	147	14	14	(2)	15	1	.....	.....
House men.....	M.	408	69	24	7	24	5	.....	.....
Kitchen help and utility men.....	M.	1,244	52	32	2	15	1	215	41
Kitchen help and utility men.....	F.	1,188	47	32	2	15	1	142	21
Kitchen help and utility men.....	M.	394	37	43	3	.....	.....	606	7
Kitchen help and utility men.....	F.	90	37	54	.....	.....	.....	.....	.....
Linen-room employees.....	M.	12	37	46	.....	10	7	34	28
Linen-room employees.....	F.	126	41	42	1	13	1	39	41
Linen-room employees.....	M.	534	12	12	(2)	9	6	117	44
Maids.....	F.	4,176	74	12	2	11	1	411	22
Maids.....	M.	152	27	56	7	.....	.....	151	3
Pantry and counter servers.....	F.	81	524	41	40	.....	.....	1,066	33
Pantry and counter servers.....	M.	98	539	41	40	.....	.....	.....	.....
Porters, baggage.....	F.	324	76	15	.....	3	6	93	45
Porters, baggage.....	M.	109	46	34	2	16	1	180	33
Stewards and storeroom helpers.....	F.	469	46	34	.....	9	6	44	89
Stewards and storeroom helpers.....	M.	94	9	73	.....	12	.....	11	.....

Waiters.....	M. 114	4,541	25	52	11	9	(²)	140	2,145	26	15	57	2	.....
Waiters, helps' hall.....	F. 76	1,162	33	53	12	2	(²)	124	2,025	22	3	73	2	(²)
	M. 44	1,150	49	41	5	4	.....	3	7	.....	100	.....	.....	.....
	F. 43	230	36	48	3	5	8	6	10	40	20	40	.....	.....
Total.....	M. 153	16,414	43	38	6	11	2	256	7,161	33	14	4	4	(²)
	F. 153	10,079	58	29	3	10	1	234	5,510	24	4	68	3	1
Grand total.....		26,493	48	35	5	10	2	258	12,671	29	10	57	4	(²)

² Less than one-half of 1 per cent.

¹ Not including 532 males and 788 females whose days off were not available from the pay-roll records.

In this table an employee is credited with receiving a half day off a week only when his hours off duty on this day are at least half his regular working hours or his work is completed by 1 p. m. Employees receiving one day off a week are shown in two groups, according to whether they receive this day off with pay or without pay, or, in other words, whether they are paid for a seven-day or a six-day week. The proportion of hotel and restaurant employees paid on a six-day basis reflects the degree to which establishments in this industry have adopted the straight six-day week, now the standard in other industries. In hotels 14 per cent of the men and 9 per cent of the women who have a day off a week are paid on this basis. In restaurants the proportion is much higher. About one-fourth of the male restaurant employees and two-fifths of the females were found in restaurants that close on Sunday; these employees necessarily fall in the class paid on the six-day basis. In the restaurants open on Sunday 63 per cent of the men and 87 per cent of the women who have a day off every week are paid on the same basis. It is also true that the percentage of both male and female employees receiving a day off a week is much larger in restaurants than in hotels.

The following table presents by cities the same information as Table 1, thus enabling comparisons to be made between different parts of the country in this respect.

TABLE 2.—PER CENT OF HOTEL AND RESTAURANT EMPLOYEES ENTITLED TO EACH SPECIFIED NUMBER OF DAYS OFF DUTY, BY CITY.

City.	Sex.	Hotels.							Restaurants.						
		Number of establishments.	Number of employees.	Per cent of employees whose days off are—					Number of establishments—	Number of employees.	Per cent of employees whose days off are—				
				None.	1 a week or 4 a month, with pay.	1 a week, without pay.	1 every 2 weeks or 2 a month or $\frac{1}{2}$ a week, with pay.	Occasional, with pay.			None.	1 a week or 4 a month, with pay.	1 a week, without pay.	1 every 2 weeks or 2 a month or $\frac{1}{2}$ a week, with pay.	Occasional, with pay.
Open Sunday.	Closed Sunday.														
Atlanta, Ga....	M.	6	433	97	—	—	3	—	6	2	151	88	3	1	8
	F.	6	361	97	—	1	3	—	5	2	103	43	31	11	16
Boston, Mass...	M.	8	854	24	39	27	8	1	3	3	280	1	99	—	—
	F.	8	604	25	52	5	18	—	3	3	504	1	99	—	—
Buffalo, N. Y..	M.	7	442	38	52	1	9	—	6	6	208	24	71	4	—
	F.	7	393	56	30	6	5	3	6	6	266	1	93	—	—
Chicago, Ill.....	M.	—	—	—	—	—	—	—	9	7	564	43	18	6	1
	F.	—	—	—	—	—	—	—	9	7	644	23	5	66	1
Cincinnati, Ohio.	M.	5	381	59	14	(1)	27	—	6	5	171	65	33	2	—
	F.	5	274	79	1	12	7	—	6	5	263	1	98	1	—
Cleveland, Ohio.	M.	6	654	42	12	46	(1)	—	3	5	209	16	79	4	—
	F.	6	531	46	11	18	25	—	2	5	70	17	81	—	—

¹ Less than one-half of 1 per cent.

TABLE 2.—PER CENT OF HOTEL AND RESTAURANT EMPLOYEES ENTITLED TO EACH SPECIFIED NUMBER OF DAYS OFF DUTY, BY CITY—Concluded.

City.	Sex.	Hotels.							Restaurants.						
		Number of establishments.	Number of employees.	Per cent of employees whose days off are—					Number of establishments—	Number of employees.	Per cent of employees whose days off are—				
				None.	1 a week or a 4 month, with pay.	1 a week, without pay.	1 every 2 weeks or 2 a month or $\frac{1}{2}$ a week, with pay.	Occasional, with pay.			None.	1 a week or 4 a month, with pay.	1 a week, without pay.	1 every 2 weeks or 2 a month or $\frac{1}{2}$ a week, with pay.	Occasional, with pay.
Denver, Colo...	M.	7	371	76	20	1	3	8	197	51	4	45			
	F.	7	337	87	(1)	5	8	8	168	88	5	8			
Detroit, Mich...	M.	5	767	28	56	15	1	7	2	152	36	27	26	11	
	F.	5	535	68	17	(1)	14	1	7	2	258	53	13	22	8
Indianapolis, Ind.	M.	7	283	88	5	7	(1)	8	101	100					
	F.	7	290	87	2	9	2		91	100					
Kansas City, Mo.	M.	5	728	42	16	41	1	3	5	137	47	1	50	1	
	F.	5	273	85	6	10		2	5	188	31	10	59		
Los Angeles, Calif.	M.	7	725	78	16	1	2	3	9	1	360	42	3	36	18
	F.	7	387	78	10	7	4	1	8	1	319	21		71	7
Louisville, Ky.	M.	6	368	92	5	3	(1)	8	1	137	88		9	3	
	F.	6	199	92	5	4		8	1	114	53		46	1	
Memphis, Tenn.	M.	3	174	100				5	1	75	91		7	1	
	F.	3	146	98	2			5	1	71	66		34		
Milwaukee, Wis.	M.	5	275	56	8	36		7	1	104	38	34	18	10	
	F.	5	260	83	1	15	1	7	1	166	78		20	2	
Minneapolis, Minn.	M.	6	275	69	17	2	11	1	7	3	134	41	10	46	2
	F.	6	256	63	16	4	12	6	7	3	178	35	3	56	5
New Orleans, La.	M.	5	810	98	1	1		6		213	92	(1)	7	7	
	F.	5	343	99	1			5		133	71		12	17	
New York City, N. Y.	M.	12	3,543	13	66	3	14	4	19	5	1,508	13	21	60	6
	F.	12	1,691	43	42		12	3	14	5	302	7	9	83	1
Omaha, Nebr.	M.	6	329	81	14		5		7	1	126	79		19	2
	F.	6	222	94	1	4	1		7	1	118	58		35	8
Philadelphia, Pa.	M.	6	894	10	66	4	20		2	7	400	2	39	58	1
	F.	6	400	1	94		5		2	7	251		12	83	
Pittsburgh, Pa.	M.	6	729	27	69		3	1	2	7	274	13	29	57	1
	F.	6	503	2	97				2	8	360		10	90	
Portland, Oreg.	M.	5	262	53	38	(1)	9		8		204	38	16	45	1
	F.	5	244	35	32		31	1	8		205	11	6	83	
St. Louis, Mo.	M.	6	599	48	35	12	2	4	11	2	224	31	7	58	4
	F.	6	494	47	33	5	15		11	2	153	9		88	3
Salt Lake City, Utah.	M.	4	200	90	8		2		7		150	62		32	6
	F.	4	181	99			1		3		43	30		28	42
San Francisco, Calif.	M.	8	1,338	20	42	19	10	8	11	1	689	13	22	64	(1)
	F.	8	498	53	41	1	1	4	5	1	156	5	3	92	
Seattle, Wash.	M.	6	288	57	30	2	7	4	10		209	26	10	64	(1)
	F.	6	222	70	10	3	17		8		186	31	1	69	
Washington, D. C.	M.	6	692	54	44		3		7	2	184	58	3	39	1
	F.	6	435	65	31		4		7	1	200	12	1	87	1
Total.....	(M.)	.....	16414	43	38	6	11	2	.....	.....	7,161	33	14	49	4
	(F.)	.....	10079	58	29	3	10	1	.....	.....	5,510	24	4	68	3
Grand total.....	.....	153	26493	48	35	5	10	2	185	73	12671	29	10	57	4

¹ Less than one-half of 1 per cent.

Striking differences are found in the proportion of employees in the several cities who are allowed a day of rest in seven. The six-day working week is more prevalent in large cities than in smaller ones. This is shown by the fact that the percentage in a good deal more than

half the cities is below the average for all cities. For female hotel employees this is the condition in 18 out of 25 cities, and for female restaurant employees in 15 out of 26 cities; while for male employees the corresponding figures are 16 out of 25 and 17 out of 26. Indianapolis is the only city included in the survey in which no restaurant employee has a day of rest; but the same condition was found among male hotel employees in Atlanta and Memphis, and among females in Salt Lake City. That it is possible to arrange schedules of work for employees which will allow each one a day of rest a week is shown by the experience of San Francisco restaurants. Eleven of the 12 restaurants scheduled in that city are open on Sunday, and yet 86 per cent of all the male restaurant employees and 95 per cent of the females listed in that city receive a day off per week.

Full-Time Weekly Hours.

CONTINUOUS operation or long daily hours of operation produce great irregularity in the arrangement of daily hours of work for men and women in the several occupations. For this reason the actual hours at which employees begin and end their work each day were secured from practically every establishment included in the survey. These scheduled daily hours do not, however, afford a basis for computing with absolute accuracy the hours which each employee actually worked during the pay period studied, because at slack times the head of a department may dismiss him early and at rush times may require him to remain after regular hours to complete his work. Overtime thus worked is frequently not reckoned as overtime and is not recorded. The small amount of over time recorded for hotels and restaurants has been disregarded, therefore, in the discussion of the hours worked by employees in this industry.

Space does not permit discussion of the full-time weekly hours or daily hours of work of employees in all occupations. The hours worked by men and women in the occupations numerically the largest in the several departments of hotels and restaurants, however, are similar to the working hours of other employees in the same department, and indicative of conditions throughout the industry. The occupations of cook, dishwasher, and waiter in both hotels and restaurants, and of bellman and maid in hotels, have therefore been selected for discussion as the most common and most typical occupations in the industry. In order to present a concise picture of the weekly hours of work of men and women in these selected occupations the following summary table, showing for each occupation, except that of bellboys, the number of employees working each specified number of hours a week, has been prepared. Bellboys are not included in this table because practically all of them work under one general arrangement of daily hours.

TABLE 3.—NUMBER OF EMPLOYEES IN SELECTED OCCUPATIONS IN HOTELS AND RESTAURANTS WHOSE FULL-TIME WEEKLY HOURS WERE AS SPECIFIED.

Occupation.	Num-ber of estab-lish-ments.	Num-ber of em-ploy-ees.	Employees whose full-time hours per week were—																					
			Un-der 36	Over 36 and under 42	Over 42 and under 48	Over 48 and under 54	Over 54 and under 56	Over 56 and under 60	Over 60 and under 63	Over 63 and under 70	Over 70 and under 77	Over 77 and under 84	Over 84 and under 84											
<i>Hotels.</i>																								
Cooks, male ¹	59	831	4	4	9	35	48	270	124	121	46	15	26	55	232	3	20	31	15	2	7	7	2	2
Cooks, male ²	100	900	2	1	2	6	11	6	34	141	8	20	55	232	3	2	72	85	67	40	16	27	22	7
Cooks, female ¹	19	37	1	1	2	2	2	3	153	25	60	37	254	3	3	8	179	63	3	3	1	1	3	5
Cooks, female ²	36	59	1	1	5	20	43	34	153	25	60	37	254	3	3	1	76	63	7	3	1	1	3	5
Dishwashers, male ¹	71	971	8	1	2	2	2	25	13	74	1	25	58	38	13	58	108	61	62	39	22	29	48	2
Dishwashers, male ²	58	667	1	1	2	25	88	54	105	8	16	56	113	3	3	13	12	5	1	1	1	1	2	4
Dishwashers, female ¹	57	549	1	1	11	8	4	33	28	111	4	35	31	3	3	55	9	9	9	9	1	1	2	4
Dishwashers, female ²	50	348	1	1	11	8	4	33	28	111	4	35	31	3	3	55	9	9	9	9	1	1	2	4
Maid ¹	131	3,670	7	25	101	74	740	319	1,575	97	133	133	181	65	114	2	31	51	5	5	2	2	2	4
Maid ²	30	426	3	3	2	24	33	88	50	18	43	90	13	51	9	13	51	31	163	43	2	2	2	2
Waiters ¹	58	1,805	65	12	48	36	117	72	241	160	128	52	429	93	59	31	163	43	43	141	18	81	31	2
Waiters ²	69	2,193	80	25	16	42	33	118	254	200	100	20	238	219	152	134	246	45	141	14	1	1	1	2
Waitresses ¹	38	461	94	5	38	71	97	54	17	102	39	61	2	1	6	8	2	2	9	1	1	1	1	2
Waitresses ²	40	505	14	13	30	77	40	99	99	102	39	61	2	1	6	8	2	2	9	1	1	1	1	2
<i>Restaurants.</i>																								
Cooks, male ¹	107	644	6	5	4	21	39	54	76	96	16	59	59	60	5	58	49	91	7	13	25	25	1	9
Cooks, male ²	156	756	2	4	2	6	6	58	21	84	4	4	66	160	5	41	91	91	36	70	22	43	24	9
Cooks, female ¹	43	137	3	2	2	2	2	36	27	19	6	9	10	3	3	5	3	1	1	12	5	1	1	1
Cooks, female ²	43	110	4	2	4	4	4	22	11	13	6	9	10	3	3	5	3	1	15	20	15	5	35	4
Dishwashers, male ¹	102	461	14	15	7	7	5	28	56	56	11	39	53	26	14	33	49	49	23	23	7	14	35	4
Dishwashers, male ²	77	240	4	2	2	2	2	18	7	33	1	8	16	21	19	19	6	6	4	6	10	1	1	9
Dishwashers, female ¹	85	487	59	7	37	37	71	83	81	72	3	30	16	12	12	17	10	10	9	37	13	6	22	3
Dishwashers, female ²	66	277	11	11	5	11	5	32	15	83	25	25	12	12	2	17	10	10	9	37	13	6	22	3
Waiters ¹	73	1,236	180	15	33	115	48	38	214	84	27	49	85	120	19	83	58	58	50	46	30	6	22	3
Waiters ²	74	791	28	21	8	16	19	103	42	84	79	2	66	78	14	18	56	56	46	46	30	6	22	3
Waitresses ¹	74	1,316	310	24	87	64	272	260	159	68	8	39	21	3	3	41	1	1	6	3	2	2	2	9
Waitresses ²	52	647	91	23	17	42	76	106	31	131	1	50	5	12	12	41	3	3	6	3	2	2	2	9

¹ Time off duty for meals is specified and is not included in full-time weekly hours.² Time off duty for meals is not specified and is included in full-time weekly hours.

In Table 3 no distinction is made between those who work six days a week and those who work seven days a week. Naturally, however, the full-time weekly hours of employees working a seven-day week would be longer than those of employees working a six-day week. Employees working less than 36 hours a week are usually part-time workers. Relief employees, and employees who have a half day off a week but whose exact hours off are not reported, are necessarily excluded. In the majority of establishments employees who are entitled to meals eat at least one meal a day during working hours. In many establishments, especially hotels, employees have no regular time allowed in which to eat their meals, but take as much or as little time as they need or the pressure of business permits. In other establishments from 20 minutes to an hour is allowed for a meal, with never more than an hour and a half total meal allowance during working hours. In Table 3 two groups of employees are presented separately under each occupation term. In the first line the data are given for employees who receive regular time off for meals during working hours; in the second line the same information is given for those who have no specified time off for meals during working hours. Because of this arrangement a comparison of the weekly hours worked by the two groups can readily be made. In establishments where no regular time is allowed for meals the full hours on duty have necessarily been used as the regular working day, whereas in establishments where regular time is allowed for meals, such time has been deducted from the total working hours of each employee to obtain his actual working hours. This deduction of time allowed for meals, however, does not account entirely for the shorter hours worked by those in the first group under each occupation. Employees in establishments allowing regular time for meals work on the average fewer hours per week than employees in establishments which do not regulate the time for meals. In other words, an establishment which arranges regular meal periods also usually regulates more carefully hours of work and general working conditions.

The groups having regular time for meals afford the best basis of comparison of weekly hours worked by employees in the several occupations. The most striking facts brought out by the table are the extreme differences in the length of the working week of employees in the same occupation, and the long weekly hours worked by large numbers of men and by some women. Extreme variation in the length of the working week is found even among establishments in the same city, indicating an extraordinary lack of standardization in the working week. Full-time weekly hours of men are longer than those of women in all occupations. Slightly more than half the male hotel employees work between 49 and 60 hours a week, and about the same number of the male restaurant employees work between 49 and 63

hours a week; while approximately half the female hotel employees work between 48 and 56 hours a week, and the same proportion of the female restaurant employees between 42 and 54 hours a week. Twenty-two per cent of the men in all hotel and restaurant occupations work more than 60 hours a week, while 24 per cent of the women in hotel occupations and only 16 per cent of the women in restaurant occupations work 54 hours or over a week. The greatest difference in length of working week for men and women in the same occupation is found in the unskilled occupations. As the men in the skilled occupations work shorter hours than those in the unskilled occupations, their hours approximate more closely to the hours of women in these occupations. The shorter hours of the women are of course due to a certain extent to the several State laws regulating hours of women's work. A glance at the table reveals, however, that 11 women in hotels and 2 women in restaurants, including those to whom time off duty for meals is not specified, are working 84 hours or over a week. Of the men, 112 in hotels and 98 in restaurants, including both groups of employees, are working 84 hours or over a week. Eighty-four hours a week means 12 hours a day for seven days, a condition sometimes rendered more unbearable because the 12 hours' work is distributed over a stretch of 15 hours or more. Employees in the unskilled occupations suffer most frequently from hours as long as these. But even in the skilled occupations the working time is longer than in many industries and longer than is generally regarded as desirable. Of the male employees whose full-time weekly hours as shown in Table 3 do not include time off for meals, cooks in hotels and waiters in restaurants constitute the only groups with 25 per cent of their members working as little as 48 hours per week, or 50 per cent working less than 54 hours a week. Among the female employees whose working week does not include time for meals the percentage whose hours per week do not exceed 48 varies from 34 for maids to 78 for waitresses in hotels and from 55 for cooks to 75 for waitresses in restaurants.

Daily Hours of Work.

THE arrangement of the daily hours of work of hotel and restaurant employees is influenced largely by the long hours of operation of most of the departments of a hotel or restaurant, and in the case of kitchen and dining-room employees by the occurrence of peaks of business in the dining room at meal times. The unequal number of employees needed at different hours has induced a prevalence of split shifts and shifts which vary from day to day. In considering the daily hours of hotel and restaurant employees it should be borne in mind that although some may not be busy every minute during their working hours, they must nevertheless be at their posts of duty ready to respond to any call.

Waiters and Waitresses.

OF ALL hotel and restaurant employees waiters and waitresses have the most irregular hours and the most diversified arrangement of shifts. For hotels the records on which this report is based cover 4,541 waiters and 1,162 waitresses. Only one-third of these waiters and one-half of the waitresses work uniform hours day after day, the remainder work on shifts which alternate from day to day or week to week, or rotate through several days or weeks. Of those working uniform hours from day to day a minority only, consisting of one-fifth of the waiters and less than one-half of the waitresses, work straight, unbroken shifts; of these many are part-time employees who are hired for a single meal per day. The remaining four-fifths of the hotel waiters and one-half of the waitresses in the group that work uniform hours from day to day have split shifts. For employees on split shifts the time limits within which the day's work falls are only less important than the number of hours per day worked. For the waiters in this group the common arrangement of the working day is between 8 and 11 hours of work falling within between 13 and 15 consecutive hours of the day. There are 29 waiters in hotels, however, whose broken shifts extend over more than 16 hours per day; four work 13 hours a day within 18 hours. As would be expected the hours of women are less extreme than those of men. Of those having uniform split shifts from day to day the largest group in hotels have 7 and under 8 hours of work falling within between 12 and 14 hours.

In the second division of the waiters and waitresses mentioned above, those who work alternating or rotating shifts, the most common arrangement is one in which the hours alternate from day to day. Such alternating shifts are worked by 1,633 hotel waiters. The majority of these waiters work a straight shift one day and a split shift on the following day; for 35 per cent of them the split shift consists of an average of 11 hours distributed over 18 hours or more a day. Of the waitresses of this division 148 work alternating shifts. More than half of them have split shifts every day, with a different arrangement of hours on the two shifts. The prevalent working day among them is one of 9 hours or less over a stretch of less than 13 hours. Five hotel waitresses were found, however, whose working hours every day extended over a stretch of 18 hours.

In restaurants 2,222 waiters and 2,598 waitresses were listed in the survey. Of this number approximately 50 per cent of both waiters and waitresses work uniform hours from day to day, and 50 per cent work alternating or rotating shifts. Of the former group one-half of the waiters and two-thirds of the waitresses have straight, unbroken shifts. As in the case of hotel employees many of these are

part-time workers. The other 50 per cent of restaurant waiters and waitresses with uniform hours have split shifts. Their hours are similar to those of the corresponding groups in hotels. In the case of 10 waiters, however, the working hours are spread over more than 16 hours per day. The prevailing hours for women in this group are 7 and under 10 within 12 and under 14 hours per day. No waitress in this group has hours of work spread over more than 16 hours per day.

Of the group of waiters and waitresses in restaurants working alternating or rotating shifts 437 waiters and 123 waitresses had shifts alternating from day to day. The hours are shorter, and the spread of hours less, in restaurants than in hotels. No restaurant waiter works over as long a stretch as 18 hours a day. As in hotels more than half the restaurant waitresses with alternating shifts have split shifts every day. The prevalent working day is one of 9 hours or less included within 13 hours or less.

There are other large groups of waiters and waitresses in hotels and considerable numbers in restaurants who work on shifts which change every day for a period of days or every week for a period of weeks. Examples of such shifts worked by waiters in hotels are shown in the chart on page 102.

In all the charts accompanying this article the number of employees represents the number on the pay roll during the period studied and not necessarily the number of full-time positions in the establishments. The first establishment shown on Chart A employs 39 waiters and arranges its hours to rotate weekly, each waiter working a six-day week on each shift. In the fourth establishment, which employs 16 men, shifts rotate daily through a seven-day week. No man necessarily works three consecutive days on the shift starting at noon and lasting until 1 a. m., but during each week he works three days on this shift. Although very long shifts are broken by an hour or less allowed for a meal, this break could not be indicated on the chart as the exact hours at which meals are served were not ascertained.

It will be noticed that all the waiters represented on this chart work on some days over stretches of at least 13 hours and that the work of several of them extends over much longer periods. In the next to the last establishment shown a waiter never works a straight shift. The fourth establishment, with 16 men working seven days a week, has the most severe arrangement of hours. Although these men are off at 2 in the afternoon on two days out of seven, the other five days they must work until 1 a. m. In a hotel like this with considerable after-theater business a waiter must often stay on popular nights until 2 o'clock or later to complete the service of guests. No matter how this schedule may be arranged there is one morning when the waiter has to be on duty no later than 8 o'clock following a night when he has been on duty until 1 o'clock. In other words, there are two

working days every week between which the waiter has no more than seven hours of rest at night. These men work $77\frac{1}{2}$ hours in a seven-day week.

CHART A.—ROTATING SHIFTS FOR WAITERS IN EIGHT HOTELS.

Number of Employees on Payroll	Days Worked per Week	Days in Period of Rotation	Days Worked on Each Shift																								
				Am.												pm											
				6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5
39	'6	18	6 6 6																								
11	7	3	2 1																								
17	'6	3	1 1 1																								
16	7	7	1 1 1 3																								
18	'6	3	1 1 1																								
56	'6	4	1 1 1 1																								
18	'6	6	2 3 1																								
9	'6	3	1 1 1																								

¹ Entitled to 1 day off each week.

Representative Arrangement of Shifts.

THE hours of waitresses in hotels are broken in a manner similar to those of the men, but their hours on duty are usually fewer, with longer rest periods at night. The following arrangement of hours found in a small hotel employing six waitresses, in shifts rotating as indicated, seems to involve the maximum of inconvenience for the employees. Each employee works—

Two days: 8 to 10 a. m., 12 m. to 2.30 p. m., 6 to 9 p. m., 9.30 to 12 p. m.

Two days: 12 m. to 5 p. m., 5.30 to 6 p. m.

One day: 8 to 10 a. m., 12 m. to 2.30 p. m., 9.30 to 12 p. m.

One day: 6 to 6.30 a. m., 7 to 11 a. m., 6 to 9 p. m., 10 to 12 p. m.

That it is possible to arrange the hours of waiters, even in large hotels, with more regard for the convenience and advantage of the employees, is shown by the successful experience of a large Pacific coast hotel employing about 150 waiters. The men work in shifts, changing weekly from one shift to another. For the week covered by the survey the schedule was arranged as follows:

- 7 worked from 10.30 a. m. to 2 p. m. and from 2.45 to 8.30 p. m.
- 7 worked from 11.45 a. m. to 2.15 p. m. and from 6 p. m. to 1 a. m.
- 10 worked from 12 m. to 2.30 p. m. and from 6 p. m. to 12.30 a. m.
- 2 worked from 11.30 a. m. to 8.30 p. m.
- 7 worked from 11.30 a. m. to 2 p. m. and from 2.45 to 6 p. m.
- 7 worked from 12 m. to 2 p. m. and from 5.45 to 9.45 p. m.
- 7 worked from 11.45 a. m. to 2.45 p. m. and from 5.30 to 6.30 p. m.

The last three shifts are known as three-quarter shifts; while on them the men receive three-fourths of their regular weekly wage.

The arrangement of hours, both for waiters and for waitresses, is usually better in restaurants than it is in hotels. Several instances of well-arranged systems were found. Thus a restaurant in the eastern part of the country having the heaviest part of its business at night, and employing 30 waiters, operated under the following schedule:

- 4 worked daily from 12 m. to 8 p. m.
- 1 worked daily from 7 a. m. to 3 p. m.
- 25 worked on alternate days { from 12 m. to 8 p. m. on one.
from 5.30 p. m. to 1 a. m. on the other.

The shortening of the late shift makes allowance for the frequent obligation of the waiters to remain later than 1 o'clock to complete the service of guests.

That it is possible to make satisfactory arrangements of hours of waitresses in restaurants may be further illustrated by the following examples. The first restaurant is in the East and employs 115 full-time waitresses; the second is in the West and has 18 waitresses on the pay roll. The arrangement of hours is as follows:

Restaurant A:

- 5 work from 6 a. m. to 3 p. m.
- 1 works from 7 a. m. to 3 p. m.
- 1 works from 8 a. m. to 5 p. m.
- 2 work alternating days from 7 a. m. to 3 p. m. and from 10.30 a. m. to 7.30 p. m.
- 28 work from 10.30 a. m. to 7.30 p. m.
- 42 work from 11 a. m. to 8 p. m.
- 7 work from 12 m. to 3 p. m. and from 5 to 8 p. m.
- 4 work from 11.30 a. m. to 3 p. m.
- 22 work from 12 m. to 3 p. m.
- 3 work from 5 p. m. to 8 p. m.

Restaurant B:

- 4 work from 6 a. m. to 2 p. m.
- 2 work from 7 a. m. to 3 p. m.
- 2 work from 8 a. m. to 2 p. m. and from 6 to 8 p. m.
- 1 works from 8 a. m. to 1.30 p. m. and from 5 to 7.30 p. m.
- 4 work from 12 m. to 8 p. m.
- 4 work from 4 p. m. to 12 p. m.
- 1 works from 5 p. m. to 1 a. m.

Cooks.

IN CONTRAST to the experience of waiters a large proportion of cooks work the same shifts every day. Of this group, consisting of 1,424 male hotel cooks, 1,195 male restaurant cooks, 73 female hotel cooks and 214 female restaurant cooks, about half work unbroken shifts. The remainder work split shifts, running approximately from 7 a. m. to 2 p. m. and 5 to 8 p. m. Among the men who work straight unbroken shifts, however, there is the widest variation in working conditions. Because a hotel or restaurant worker has a straight shift he does not necessarily have short hours. In Chart B are represented the hours of cooks in three restaurants having unbroken long shifts and in four having similar short shifts. The three restaurants in the first group are located in the South, Middle West, and East, respectively, while of the four in the second group two are in eastern cities and two on the Pacific coast. (See Chart B.)

Housekeeping and Service Departments.

ALARGE majority of employees in the housekeeping and service departments work seven days a week. Numerically the occupation of maid is the largest in the housekeeping department and the largest female occupation in the industry. Of approximately 4,000 maids included in the survey, 6 per cent work over 60 hours a week and 62 per cent work from 48 to 56 hours per week. Daily hours of work for maids are usually included between the hours of 6 a. m. and midnight. Regular work is all performed before 6 p. m., but evening maids are required to make up rooms vacated late in the day. About half the 4,000 maids are employed in hotels in which regular day maids work straight shifts broken only for lunch, and where the necessary night work is done by different groups. In these hotels the day shifts work from 7.30 or 8 a. m. to 4 or 5 p. m. and the night shifts from 4 or 5 p. m. to 11 p. m. or midnight. From one-half to one hour off is allowed for lunch or supper. The Sunday shift for about 900 of this group is shorter than the week-day shift by approximately two hours. The daily and weekly hours of all this group of maids are comparatively short, and are much easier than those of the other half of the maids included in the survey.

The 2,000 maids constituting this other half work straight, alternating, or rotating shifts, so arranged that each maid takes her turn at night work. About 700 of them work straight day shifts with the addition of a night watch every fifth to ninth day. This

CHART B.—STRAIGHT SHIFTS FOR MALE COOKS IN SEVEN RESTAURANTS.

Number of Employees on Payroll	Days Worked per Week	Number of Employees on Each Shift																								
			A.M.												P.M.										A.M.	
			4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
4	7	1 1																								
5	7	2 2																								
22	² 6	15 3 1 1 1																								
6	³ 6	2 2 2																								
9	³ 6	1 1 1 1 1 2 2																								
5	³ 6	1 1 1 2																								
20	³ 6	1 8 2 3 6																								

¹ Straight night shift.² Entitled to 1 day off each week.³ Closed on Sunday.

long day may extend straight through from 8 in the morning to 11 at night with breaks only for meals, or it may extend approximately from 8 a. m. to 3 p. m. and from 6 to 11 p. m. Occasionally the night shift is on duty only until 7 or 8 o'clock. In many instances maids in this group have comparatively short shifts on

Sunday. Chart C gives ten examples of rotating shifts in as many hotels in different cities.

Maids who work over a long, unbroken stretch of hours are allowed an hour or less for one meal. As the exact hours at which meals are eaten were not reported, it was impossible to show breaks for meals on the chart. The frequency of night work varies; it is required 8 nights out of 13 in the first establishment, 2 nights out of 4 in the third, and only 1 night a week in the 2 establishments employing 82 and 79 maids, respectively. The women working on the extremely broken shifts in the first establishment are lodged in the hotel and can therefore retire to their own rooms during the short periods of time elapsing between shifts. On the other hand, the fact that they are lodged in the house enables the management to call on them for extra work when any employees are absent from duty or when the hotel is unusually busy.

The type of shift worked by maids is frequently the same for practically all hotels in the same city, although the actual hours on duty may vary considerably from establishment to establishment. In States in which there are no State laws regulating the hours of work for women, weekly hours for maids vary extremely in different hotels, and are apparently regulated in each case entirely by the management.

Practically all the 1,768 bellboys included in the survey work alternating long and short days of strikingly similar length throughout the country. A large majority of them work approximately 6 hours, from 12 m. to 6 p. m. on one day, and on alternate days have long hours divided between two shifts. The largest number work on this long day 12 and under 13 hours, completed in 18 and under 19 hours. Another large group works on the long day 11 and under 12 hours, distributed over 17 and under 18 hours, and a third group works 10 and under 11 hours, distributed over 16 and under 17 hours. These long day shifts extend approximately from 6 or 7 in the morning to noon and from 6 at night until 11 or midnight. In some establishments the hours on the long day vary in rotation. For example, in one hotel all bellboys begin their evening shift at 6 p. m. Each man remains on duty one night until 11 o'clock, the second night until 11.30, the third night until 12, and the fourth night until 12.30. The fifth night he leaves again at 11 o'clock.

Only 49 bellboys were found working unbroken shifts every day. Twenty-eight of these were in one establishment with shifts alternating weekly, the daily hours being from 6 a. m. to 3 p. m. during one week and from 3 p. m. to 1 a. m. during the next week. The night force of bellboys is usually composed of one or two men who

work from 11 p. m. to 7 a. m. and act as elevator men as well as bellboys. The usual full-time weekly hours of bellboys are between 56 and 63, spread over a 7-day week.

Of the 56 women listed as bellboys 37 work alternate long and short shifts similar to those of the men, but usually with somewhat shorter hours on the long day. All but four of the women work a six-day week. Their weekly hours are, therefore, much less than those of the men, 31 of them working only 42 hours a week. Their work is apparently specialized, and not exactly like that of the regular bellboys. It is evident, therefore, that women have not replaced men to any appreciable extent in this occupation.

Conclusion.

THE outstanding features of employment in the hotel and restaurant industry as revealed by this study of hours are the long hours of work, especially among men, as compared with most manufacturing industries; the numerous instances of split shifts spread over excessively long periods; and the extreme variation in the length of the week for employees in the same occupation, not only in different cities but also among different establishments in the same city, showing the great lack of standardization in the industry. Since some of the establishments scheduled, especially those in the Pacific coast and the eastern cities, have been able to inaugurate a six-day week with shorter daily hours and better wages, it seems reasonable to believe that better working conditions might be introduced quite generally in the industry.

Practice Regarding the Payment of Punitive Overtime Rates.

By LEIFUR MAGNUSSON.

Establishment of Overtime Rates by Legislation.

THE policies of the war labor administration undoubtedly caused considerable extension of the practice of paying punitive overtime rates. All war labor agencies, either directly or by implication, accepted trade-union practice in that respect. The War and the Navy Departments took a definite stand in the matter and ordered the payment of an extra overtime rate on all their construction work. General Order No. 13, November 15, 1917, issued originally by the Chief of Ordnance and repeated by the Quartermaster General, explained the theory of paying punitive overtime rates in these terms:

The theory under which we pay "time and a half" for overtime is a tacit recognition that it is usually unnecessary and always undesirable to have overtime. The excess payment is a penalty and intended to act as a deterrent. There is no industrial abuse which needs closer watching in time of war.

The law of the Federal Government limiting the hours of work on all public contracts to eight hours per day permits overtime only in cases of emergency. During the war the eight-hour day on Government shipbuilding, munition, and construction contracts was suspended because of the war emergency. The Executive order of March 22, 1917, one of several similar orders which suspended the eight-hour day on different kinds of Government work, provided "that the wages of persons employed upon such contracts shall be computed on a basic day rate of eight hours' work, with overtime rates to be paid for at not less than time and one-half for all hours worked in excess of eight hours."

Likewise during the war the Bureau of Engraving and Printing began working overtime and paying an extra rate of compensation for such work.

Previous to the exigencies in Government work created by the war the act of August 24, 1912, provided that beginning March 4, 1913, letter carriers in the city delivery service and clerks in first and second class post offices who in case of emergency were employed over eight hours per day should be compensated at the rate of time and a half. Section 5 of chapter 389 of the act reads as follows:

In cases of emergency, or if the needs of the service require, letter carriers in the city delivery service and clerks in first and second class post offices can be required to work in excess of eight hours a day, and for such additional services they shall be paid extra in proportion to their salaries as fixed by law.

State and territorial legislation in the United States has also dealt with the problem of extra compensation for overtime. Under the Administrative Code, 1917 (ch. 42, sec. 1656), the Bureau of Printing of the Philippine Islands is required to compensate overtime work at a rate of 20 per cent in excess of normal rates on regular workdays and of 100 per cent on holidays.

An act of 1917 of Porto Rico (Act No. 43, sec. 1) requires that the chief of the bureau of supplies, printing, and transportation shall pay employees of that bureau who are paid by the hour for all work on holidays and outside of regular office hours at the rate of 50 per cent above the regular rate.

Oregon is the only State in the Union which requires extra compensation for overtime where labor is employed by the State, county, school district, municipality, or other governmental division. Chapter 98 of the General Laws of Oregon, 1917, specifies that no person shall be required or permitted to labor more than 8 hours in any one day, or 48 hours in any one week, except in cases of necessity, emergency, or where public policy absolutely requires it, in which event the person or persons so employed shall receive double pay for such overtime; and no emergency, necessity, or public policy shall be presumed to exist when other labor of like skill and efficiency which has not been employed full time is available. This act does not apply to State institutions and departments. A law similar to the above is found in the legislation of the State of Washington (Codes and Statutes, sec. 6573), which is applicable on all public contracts.

The general 10-hour law of Oregon (Section 2, chapter 102, General Laws of Oregon, 1913), which fixes a 10-hour day in all manufacturing industries, directs that if, in an emergency, overtime is worked, the rate of payment therefor shall be 150 per cent of the regular rate.

The general practice under minimum-wage legislation in the States is to discourage and limit overtime as much as possible, and to allow it only where an emergency makes it necessary. In such cases provision is made for the payment of compensation for the overtime in the orders of the commissions or boards which are charged with the enforcement of the minimum-wage laws. This compensation is usually somewhat in excess of the normal rate of compensation. The Industrial Welfare Commission of Kansas has applied a rate of time and one-half for overtime work of women subject to its orders, while that of California fixes a rate of time and one-fourth.

Cognizance is taken of overtime in foreign labor legislation either by law or administrative order. In Austria, Ecuador, Finland, France, Poland, Portugal and Jago-Slavia punitive overtime rates are to be paid to persons coming within the scope of the general eight-

hour laws. Other countries having eight-hour laws require only the payment of pro rata overtime.¹ In Great Britain a bill before Parliament in 1919 specified that not less than time and one-quarter should be paid for overtime work.

The draft convention on the eight-hour day, recommended by the recent International Labor Conference at Washington which was convened under the League of Nations and consisted of representatives of Governments, employers, and workers from 40 nations, provided for the general introduction of an eight-hour day and suggested the placing of a limit upon the amount of overtime work and the payment of time and a quarter for such overtime.

In the voluntary agreements between employers and workers and in the binding awards of the arbitration courts or wages boards of Australia and New Zealand, all work in excess of 8 hours a day or 48 hours a week must be paid for at a higher rate of remuneration.

Overtime Rulings of the National War Labor Board.²

THE National War Labor Board did not follow an invariable rule in fixing the payment of overtime work, yet its decisions are fairly uniform. In 68 cases it decided that time and a half should be paid for all overtime and in 67 cases it directed the payment of double time on Sundays and holidays. In one instance, the board awarded double time for work on Saturday afternoons and for some work late at night by those employees who were not ordinarily night-shift men. In the Sloss-Sheffield Steel & Iron Co. case the joint chairmen as arbitrators awarded time and one-quarter for work between 8 and 10 hours and time and one-half for work over 10 hours, but in another case decided by them on the same day—that of the Corn Products Refining Co.—the overtime rate was fixed at time and one-half for work beyond 8 hours and double time for that beyond 12 hours.

In the rulings of the board the special nature of the industry frequently determined the question of the payment of overtime. Under a system of shift work where continuous operation is required, Sunday work was not considered as overtime. In the newsprint paper award the board decided that whenever four workers were required to work overtime for more than two weeks to fill a vacancy, overtime compensation should be paid at the rate of double time; but in case the employer was unable to fill such a vacancy, he could apply to the union, and if the union was unable to furnish the required

¹ For an analysis of the eight-hour laws in the foreign countries see pp. 184 to 198 of this number of the REVIEW.

² Analysis of awards of the National War Labor Board, by Robert P. Reeder. Appendix No. 2, Report of the Secretary of the National War Labor Board to the Secretary of Labor for the 12 months ending May 31, 1919, pp. 80 to 84, Washington, 1920.

men the employer could not be required to pay more than time and one-half for overtime work. Work at the change of shifts was not considered as overtime work.

Railroad work was treated specially in regard to payment of overtime and train crews were given nine-hour days without higher rate for overtime although the basic day was eight hours. The ruling of the board in this matter was as follows:

The working hours for train crews shall be 9 hours per day. Should their work be completed at any time between the last half-hour point and the full 9 hours' working time, the crew shall have the privilege of going home. Should the crew be required to remain 30 minutes or less beyond the end of their ninth working hour to complete the work, no extra time shall be granted, but in case more than 30 minutes in excess of 9 hours are required to do the work overtime shall be granted at the flat hour basis. The superintendent, or his representative, shall be the judge as to when the work for the day is completed. Where it is necessary to operate the railroad for 24 hours daily, the regular 8-hour shifts shall be in operation.

In three cases the War Labor Board awarded the payment of overtime rates for time spent in traveling after the regular hours.

In calculating the overtime rate for piecework the board decided that the piece and not the day rate is to be used as the basis if that course is feasible. In only two cases before the board was this matter involved, these being the General Electric Co. case (Docket No. 127) and the Bethlehem Steel Co. case (Docket No. 22). In those awards which establish the 48-hour week as a basis of work, the board went on record to discourage excessive overtime work and directed "that where in 1 day more than 2 hours' overtime in excess of 8 hours is required, then, for that day, overtime shall be paid without regard as to whether or not the worker shall, during that week, have worked the weekly schedule provided for." This view was taken in nine cases.

Overtime in Certain Organized Trades.

THE union wage scale studies of the United States Bureau of Labor Statistics indicate the general prevalence of the practice of paying extra compensation for overtime in the principal organized trades in the United States. The following trades are included in the latest union wage scale study of the Bureau:¹

Bakery trades.	Metal trades.
Building trades.	Millwork trades.
Chauffeurs, teamsters, and drivers.	Printing and publishing, book and job.
Freight handlers.	Printing and publishing, newspaper.
Granite and stone trades.	Theatrical employees.
Laundry trades.	Waiters.

¹ Bulletin No. 259, Union scale of wages and hours of labor, May 15, 1918.

The standards as to overtime set up in the trades mentioned are, as a rule, followed by the unorganized as well as the organized workers. The Bureau studies in question covered the principal cities of the country and these are generally the largest in their respective sections of the country. Within the cities in question there are found more than one-third of the total number of persons engaged in gainful occupations, not including those in agricultural pursuits.

Overtime in Certain Basic Industries.

THE practice of paying punitive overtime rates is common in the largest basic industries of the country, among which may be mentioned the steel, slaughtering and meat-packing, and shipbuilding industries, longshore work, and the merchant marine.

Iron and steel industry.—In placing its employees on the basic 8-hour day, effective October 1, 1918, the United States Steel Corporation announced that time and one-half would be paid for all overtime beyond the eight hours.¹ Both mines and industrial establishments of the corporation were affected. Iron and steel employees proper work in two shifts; and mechanics work 10 hours. The order of the corporation directly affected over 250,000 workers.

Packing industry.—By an award in May, 1918, Judge Samuel Alschuler, the administrator for the Government in the arbitration of the packing industry disputes, introduced for the first time the principle of payment for overtime in that industry. The rate fixed was time and one-quarter for the first two hours over eight per day and time and one-half for all work after that. This award affected approximately 100,000 employees in the slaughtering and meat-packing industry of the United States. In discussing the question of compensation for Sundays and holidays and week-day overtime, Judge Alschuler used the following language:

As to the fairness of the demand for a higher rate of compensation for Sundays, holidays, and week-day overtime there was no controversy at the hearing, but it was frankly conceded by such of the packers who testified, and by all of the superintendents. In testifying before the United States Commission on Industrial Relations about three years ago Mr. O'Hern, referring to the result of overtime work, said, "We do not get the results in overtime nor do we have men working as efficiently." While presumably he was referring to overtime beyond 10 hours, it would of course have application to the true economic day's work whatever it may be, and it is likewise true that if the overtime beyond the economic day's work is continued on successive days for any considerable time, the impaired results of the labor, and the inefficiency of the laborer would not be limited to the overtime itself, but be reflected in the entire day's work as well. The higher rate serves to deter employers from unnecessarily requiring employees to work at such times; but if such work is necessary it serves also to compensate the employee for the added sacrifice he makes in so working at times when he should have his liberty.

¹ MONTHLY LABOR REVIEW, November, 1918, p. 133.

² Idem, May, 1918, pp. 115-127.

As to the particular holidays there was some contrariety of view, and likewise as to the amount of the extra pay for Sundays and holidays. It is my judgment that double time should be allowed for work on Sundays, and on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. Where any operation is continuous in three 8-hour shifts, I do not believe extra pay for Sunday should be allowed if provision is made for relieving the employee from work on some other day of the week.

As to overtime pay for week days, the employers, while conceding the general fairness of the principle, contend that the overtime should be allowed for the excess of hours served in the week. That is, if the basic day were 10 hours, excess time should be allowed only if in the week over 60 hours were served. This system is in vogue in many industries, but I do not think it tends so well to serve the purpose of minimizing the daily hours, or rather of equalizing them from day to day, as would the daily application of the principle. If with the eight-hour day the employers may with immunity work the employees 16 hours daily for three days of the week, and not at all for the others, they might regulate their stock purchases and holdings accordingly, whereas if the added pay for overtime applied to the days, they would be more likely to make effort to conform to the eight-hour day, as it would probably be more to their advantage to carry over some of the stock for another day or two than to pay the added rate for overtime.

The most usual and customary rate for week-day overtime is time and one-half, and as to such time served beyond 10 hours I have no hesitancy in fixing that rate. I am convinced, however, that for a very considerable time after the basic eight-hour day becomes effective, at least until employers and employees have become adjusted to the new conditions, it will from time to time be necessary to serve some overtime. In view of this fact I do not believe it would be fair, at least until long enough after the basic eight-hour workday becomes effective to determine more definitely from experience in this industry, to impose on the first two hours so large a penalty as for the excess over 10 hours; and I have accordingly concluded that on and after next May 5 for the first two hours of week-day overtime the rate of compensation shall be time and one-fourth.

As to the week-day overtime rate for the time intervening between January 14, 1918 (on and after which date the said arbitration agreement is by its terms effective), until said May 5, when the basic eight-hour day becomes operative, week-day time in excess of 10 hours daily shall be compensated at the rate of time and one-half and Sundays double time.

Shipbuilding.—In accordance with a series of decisions commencing in March, 1918, the Shipbuilding Labor Adjustment Board fixed the standard of an eight-hour workday with overtime rates for hours in excess thereof. On October 1, 1918, these decisions governing working conditions in the shipyards were harmonized in two decisions, one applicable to Pacific coast yards and the other to the Atlantic coast, Gulf coast, and Great Lakes shipyards. The general overtime rate in the industry is time and one-half.

The number of employees in the shipyards of the United States under control of the Emergency Fleet Corporation, which would include practically all the yards, was 289,594 on June 30, 1919. The maximum number employed is represented by the figures for November, 1918—that is, 336,000.

The terms of the award of March 7, 1918, governing working conditions in the shipyards of the Newport News Shipbuilding & Dry Dock Co., may be cited as typical respecting the matter of overtime. The overtime rate is time and one-half on regular week days and double time on holidays. Employees engaged on certain kinds of repair work also receive double time on week days. The terms of the award respecting overtime are as follows:

(2) Work in excess of these periods on any week day shall be counted as overtime and paid for at the rate of time and one-half.

(3) Work in excess of 60 hours a week for any employee shall not be permitted, except on repair work, or when ordered by the Navy Department or the Emergency Fleet Corporation, or to protect life or property from imminent danger.

(4) Work on Sundays and the following holidays shall be paid for at the rate of double time: New Year's Day, Washington's Birthday, Decoration Day or Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

(5) Men employed on the night shift shall receive compensation 5 per cent higher than is paid to those employed on the day shift.

(6) Employees engaged on repair work in or upon vessels undergoing repair shall receive double time for all overtime on week days as defined above, as well as on Sundays and the specified holidays.

Our purpose in limiting overtime by the above 60-hours-a-week regulation is to discourage a resort to excessive overtime, which leads to inefficiency and tends to lessen rather than to increase production, and to encourage the introduction of the two and three shift systems. The feasibility of working two or three eight-hour shifts in shipbuilding plants has been conclusively demonstrated, and we urge the Newport News Shipbuilding & Dry Dock Co. to take immediate steps looking toward the introduction of additional shifts in their yards.

American merchant marine.—By virtue of union agreements and subsequent confirmation by the United States Shipping Board, payment for overtime exists as a general practice in the United States merchant marine. Approximately 270,000 persons are engaged in the merchant marine of the United States.¹

The rules respecting overtime provide for a special flat rate of compensation per hour, inasmuch as those engaged in the marine occupations are paid the regular compensation on a monthly basis. The principle respecting the payment of overtime is the same for the Atlantic coast as for the Pacific coast.

It may be noted in this connection that overtime rates are paid, for instance, in the merchant marines of Sweden and Italy as shown by recent laws enacted by those countries regarding the merchant-marine service.²

Longshoremen.—An examination of the various agreements in the longshore industry for the port of New York since 1912 shows the existence of the practice of paying an extra rate of compensation for

¹ Report of the Director of Marine and Dock Industrial Relations Division, U. S. Shipping Board, Dec-31, 1918, pp. 67, 68.

² MONTHLY LABOR REVIEW, December, 1919, p. 259; January, 1920, pp. 158-173.

Sunday and holiday work. Likewise the recent awards of the National Adjustment Commission direct the payment of punitive overtime rates in the principal lake and sea ports of the country.

The estimates of the number of longshoremen in American ports range from 100,000 to 150,000.

Railroad service.—The Adamson Act of September 3, 1916, established a basic eight-hour day for employees of carriers engaged in interstate and foreign commerce. While overtime is not forbidden under the act and may extend up to the limitations prescribed by the 16-hour law, work in excess of eight hours must be paid for at a rate not less than the pro rata of the standard eight-hour day. This act affected approximately 400,000 railroad employees in the operating branch of the service.

Various orders respecting rates of pay and hours of work of railroad employees have been issued by the Railroad Administration. The latest order issued is Supplement No. 25 to General Order No. 27, effective December 1, 1919. This order provides in practice for an overtime rate of time and a half in the freight service, thus bringing about a radical modification in payment for overtime work on railroads. The section of the order having to do with the basic day and overtime rates is as follows:

(a) In all road service, except passenger service, 100 miles or less, eight hours or less (straightaway or turnaround) shall constitute a day's work. Miles in excess of 100 will be paid for at the mileage rates provided.

(b) On runs of 100 miles or less overtime will begin at the expiration of eight hours; on runs of over 100 miles overtime will begin when the time on duty exceeds the miles run divided by $12\frac{1}{2}$. Overtime shall be paid for on the minute basis, at a rate per hour of three-sixteenths of the daily rate.

(c) Road conductors and trainmen performing more than one class of road service in a day or trip will be paid for the entire service at the highest rate applicable to any class of service performed. The overtime basis for the rate paid will apply for the entire trip.

The recent agreement between the Railroad Administration and the railway employees department of the American Federation of Labor, comprising the various crafts in occupations allied to railroading, that is, the machinists, boiler makers, blacksmiths, sheet-metal workers, electrical workers, and carmen, under date of September 20, 1919, provides as follows, respecting overtime:

All overtime, except as the provisions of rules 7, 9, 10, and 15 apply, outside of bulletin hours, up to and including the sixteenth hour of service in any one 24-hour period, computed from the starting time of the employee's regular shift, shall be paid for at the rate of time and one-half and thereafter at the rate of double time, up to the starting time of the employee's regular shift.

This to include work performed on Sundays, New Year's Day, Washington's Birthday, Decoration Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas, and such State holidays as are now recognized as punitive overtime days at the various points on the respective railroads within the different States.

Likewise the agreement between the Railroad Administration and the maintenance-of-way employees and railway shop laborers, effective December 16, 1919, provides for overtime at time and a half for all work over eight hours. A typical provision of the agreement—there are certain limitations and restrictions—is as follows:

Overtime for laborers in extra or floating gangs whose employment is seasonal and temporary in character, when engaged in work not customarily done by regular section gangs, such as ballasting and rail laying, including the tie renewals incident thereto, and ditching or in improvement work such as bank widening, grade and line changes, riprapping and similar work, shall be computed for the ninth and tenth hour of continuous service, exclusive of the meal period, pro rata, on the actual minute basis and thereafter at the rate of time and one-half time. Such extra or floating gangs will not be used to displace regular section gangs.

Overtime for regular section laborers and other employees except those covered in sections (a-7) and (a-12) of this article shall be computed after the eighth hour of continuous service, exclusive of the meal period, on the actual minute basis at the rate of time and one-half time.

Garment industry.—Time and a half for overtime is the prevailing practice in the garment industry of the United States. The number employed in this industry ranges, as estimated, from 125,000 to 150,000. The provisions of the agreements in the cloak, suit, and skirt industry of New York City signed, respectively, in May and June of last year and effective until June, 1922, may be cited as an example for the industry.¹

All operators, finishers, and piece tailors shall be paid at the rate of time and one-half for overtime. All other classes of workers for whom the last agreement provided that double time shall be paid for overtime shall receive that rate under this agreement.

Coal mining.—The payment of extra compensation for overtime is not in practice in the coal-mining industry of the United States. The anthracite agreements provide merely for a pro rata overtime. The only information which the Bureau has concerning the payment of overtime has reference to Germany's mining industry, in which the practice is to pay double time for Sundays and a less rate for week-day overtime. In Saxony, for instance, the overtime rate is time and one-quarter for work on regular days.²

Obviously there are industries and occupations other than those considered above in which the practice of paying a higher rate than normal for overtime work is quite generally observed either through the industry as a whole or in certain districts or markets. Thus the lumber industry in the Northwest States, affecting probably 50,000 workers, began the practice during the war. This survey of the extent to which punitive overtime is paid in American industry has merely sought to bring together the more important examples such as could be more readily discovered.

¹ MONTHLY LABOR REVIEW, December, 1919, pp. 53, 57.

² Economic Notes from German and Austrian Newspapers, No. 53, Dec. 22, 1919, issued by the British Government, pp. 11, 67.

Recent Railroad Wage Award in Queensland, Australia.

THE Queensland Industrial Gazette for November, 1919, publishes the text of an award made by the court of arbitration governing the wages and hours of labor of railroad employees in that State. The terms of the award, effective as to wages on July 1, 1919, and as to hours on November 1, 1919, are here presented for a few of the most important occupations. The wages, shown in English currency,¹ differ in the three divisions into which the State is divided.

The figures given for clerks and telegraphers apply to persons 21 years of age and over. The table shows the minimum salary established for each occupation. This minimum is to be increased by not less than £10 after two years, and by not less than £10 each year thereafter until the total increase amounts to £40. In the interest of efficiency the commissioner of railways may increase a salary to £235, £245, or £260, in the respective divisions. The hours shall be 6 $\frac{3}{4}$ Monday to Friday, inclusive, and 3 on Saturday, making a total of 36 $\frac{3}{4}$ hours per week. Overtime shall be paid for at time and a half. This group does not include typists, switchboard attendants, or comptometer operators.

The duties of car conductors are to examine and collect tickets, to assist guards in taking on and discharging passengers, and to cleaning and preparing their own cars. The basic hours in this occupation are 48 per week, with overtime paid for at time and a half. Guards are the men in charge of trains. Their basic hours are 8 per day. Overtime is paid for at time and a half, and after 12 hours at double time.

The basic hours and the provision for overtime for engine (locomotive) drivers and firemen are the same as for guards.

¹ Owing to fluctuations in the rate of exchange, conversions are not made into United States money. Normally the value of the pound sterling is \$4.8665, of the shilling, 24.3 cents, and of the penny, 2.03 cents.

WAGES PER HOUR OF RAILROAD EMPLOYEES IN QUEENSLAND, AUSTRALIA, BY
OCCUPATION AND DIVISION, UNDER AWARD EFFECTIVE JULY 1, 1919.

Occupation.	Rate of wages per hour in—		
	Southern division.	Central division.	Northern division.
Clerks and telegraphers (minimum salaries)	¹ £175	¹ £185	¹ £200
Car conductors	¹ 215	¹ 225	¹ 240
Guards:	s. d.	s. d.	s. d.
First class	2 0	2 1	2 2½
Second class	1 10½	1 11½	2 1
Third class	1 9	1 10	1 11½
Engine drivers:			
First class	2 2	2 3	2 4½
Second class	2 0½	2 1½	2 3
Third class	1 11	2 0	2 1½
Fourth class	1 9½	1 10½	2 0
Firemen:			
First year	1 6	1 7	1 8½
Second year and thereafter	1 7½	1 8½	1 10
Engineering workshops:			
Acetylene and (or) electric welder	2 2	2 3	2 5
Blacksmith	2 0½	2 1½	2 3½
Boiler maker	1 11½	2 0½	2 3
Bricklayer	2 0½		
Cabinetmaker	1 11½	2 0½	
Carpenter	1 11½	2 0½	2 5
Carriage builder	1 11½	2 0½	2 5
Coal man (power house)	1 8½	1 9½	
Coppersmith	2 0½	2 1½	2 3½
Driller	1 8½	1 9½	2 0½
Drop-hammer driver	1 8	1 9	1 11½
Drop-hammer forger	2 1½	2 2½	
Electrical mechanic	1 11½	2 0½	2 3
Engineman (shop)	1 10½	1 11½	2 1½
Fireman (power house)	1 8½	1 9½	
Fitter (coach and wagon)	1 11½	2 0½	
Fitter (engine)	1 11½	2 0½	2 3
Laborer	1 7	1 8	1 10
Laborer (blacksmith's shop)	1 7	1 8	1 10
Machinist (iron)	1 10	1 11	2 3
Molder and core maker	2 0½	2 1½	2 3½
Oiler	1 8	1 9	1 11½
Painter (carriage)	1 11½	2 0½	2 3
Painter (locomotive)	1 10½	1 11½	
Painter's laborer	1 7½	1 8½	1 10½
Pattern maker	2 0½	2 1½	2 4½
Plumber	1 11½	2 0½	2 3
Tinsmith	1 11½	2 0½	2 3
Toolmaker and (or) diesinker	2 0½	2 1½	2 5
Turner (wood)	1 11½	2 0½	2 3

¹ Rate per annum.

Changes in Wages and Hours in Certain Industries in France, March to August, 1919.

THE administrative councils of various French Departments have adopted scales of wages in reconstruction and similar work done on the public account, according to an article in a special issue of the Bulletin of the Ministry of Labor.¹ Wages vary according to occupation and local conditions, and districts are designated as "devastated" and "nondevastated." Higher wages obtain in the former. Such scales have been published for the Departments of Marne, Meurthe-et-Moselle, Meuse, Ain, and the Seine, and in addition for the military establishment (artillery) at Toulouse.

¹ Bulletin du Ministère du Travail, Paris, June-July-August, 1919, pp. 293-310.

The following is the scale for public excavation and construction work adopted by the Department of Marne July 30, 1919, eight hours to constitute a day's work:¹

SCALE OF WAGES ON PUBLIC WORKS IN DEVASTATED AND NONDEVASTATED DISTRICTS OF THE DEPARTMENT OF MARNE JULY 1, 1919, BY OCCUPATION.

District and occupation.	With board and lodging.		Without board and lodging.	
	Per day.	Per hour.	Per day.	Per hour.
<i>Devastated districts:</i>	<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>	<i>Francs.</i>
Adult laborers.....	13.60	1.70	15.60	1.95
Diggers and carters.....	15.60	1.95	17.60	2.20
Skilled laborers.....	17.60	2.20	19.60	2.45
Skilled general mechanics.....	19.60	2.45	21.60	2.70
<i>Nondevastated districts:</i>				
Adult laborers.....	12.60	1.575	14.60	1.825
Diggers and carters.....	14.60	1.825	16.60	2.075
Skilled laborers.....	16.60	2.075	18.60	2.325
Skilled general mechanics.....	18.60	2.325	20.60	2.575

Persons under 16 years of age are paid one-half and those between 16 and 18, 70 per cent of these wages. Normal wages are paid for overtime not to exceed two hours per day.

The Department of Meurthe-et-Moselle, on July 20, 1919, to help meet the increased cost of living, increased the cost-of-living bonuses already in force, which ranged from 2.75 to 4 francs per day, by the addition of from 0.25 franc to 1 franc. Women were granted an increase of 0.50 franc, young persons 0.25 franc, and women who are heads of families an increase of 0.75 franc. It is understood that these wages were to remain unchanged until January 1, 1920; but whenever any change in cost of living is greater than 15 per cent of that of July 15, 1919, the scale shall be revised upon demand of either the employer or employees.

In the Department of Meuse the following scale was adopted for public work either directly under public authorities or under contractors. It was to remain in force for at least three months from August 1, 1919.

HOURLY WAGES ON PUBLIC WORKS IN THE DEPARTMENT OF MEUSE, EFFECTIVE AUGUST 1, 1919, BY OCCUPATION.

Occupation.	Devastated districts.	Non-devastated districts.
	<i>Francs.</i>	<i>Francs.</i>
Ordinary laborers.....	1.30	1.00
Carters.....	1.55	1.20
Glaziers, painters, paper hangers.....	1.80	1.40
Excavators.....	1.95	1.50
Carpenters, locksmiths, tinsmiths, zinc workers, plumbers, roofers, marble cutters, chimney builders.....	1.95	1.50
Plasterers.....	2.00	1.55
Stonecutters, cabinetmakers, marble-cutters.....	2.10	1.60
Asphalt layers.....	2.15	1.65
Miners, quarrymen, road builders, masons, cement workers, bricklayers, brick pavers, pavers.....	2.20	1.70
Sewer builders, stone layers, joiners.....	2.35	1.80
Masons, rough coating.....	2.45	1.90
Blacksmith, warehouse.....	2.60	2.00

¹ Owing to fluctuations in the value of the franc, conversions are not made in this article into United States money. Normally, the par value of the franc is 19.3 cents.

In addition to wages, a cost-of-living bonus in either district of 4 francs per day was allowed. An allowance of 3 francs was granted to workmen employed at a distance exceeding 6 kilometers (3.7 miles) from their homes, unless lodged by the contractor, and of 1.5 francs to those living at a distance of more than 6 kilometers who return home at night.

Rates per hour fixed on June 20, 1919, in the city of Bourg in the Department of Ain, are as follows: Sawyers, helpers, skilled, 1.10 francs; masons, 1.25 francs; coppersmiths, locksmiths, chimney builders, and sawyers, 1.30 francs; joiners, wall painters, 1.40 francs; stonecutters, 1.50 francs; masons, tinsmiths, tilers, 1.55 francs; and carpenters, 1.60 francs.

The following scale was established on March 29, 1919, for the military establishment (artillery) at Toulouse:

SCALE OF WAGES IN FORCE AT THE MILITARY ESTABLISHMENT AT TOULOUSE,
EFFECTIVE MARCH 29, 1919.

Occupation.	Weekly wages.	
	Minimum.	Maximum.
Metal working:	<i>Francs.</i>	<i>Francs.</i>
Millwright, turner, hand blacksmith.....	52.50	66.00
Millwright, turner, pattern tracer, fitter, reamer, blacksmith.....	48.00	60.00
Driller, planer, mortiser, and similar occupations.....	43.50	57.00
Sheet-iron worker, zinc plumber.....	45.00	57.00
Coppersmith, and pattern tracer on tin.....	51.00	63.00
Sheet-iron and copper worker, tinsmith.....	45.00	57.00
Welder.....	45.00	57.00
Melter and molder, brass and bronze, handwork.....	43.50	57.00
Melter, brass.....	52.50	66.00
Woodworking:		
Pattern maker, finisher.....	51.00	63.00
Lathe man, turner, sawyer.....	51.00	63.00
Saw sharpener.....	45.00	57.00
Sawyer, mortiser, planer, machinemén.....	43.50	57.00
Joiners—1st class.....	48.00	60.00
2d class.....	45.00	57.00
Carpenter.....	51.00	60.00
Wheelwright, cooper.....	45.00	57.00
Building trades:		
Mason.....	42.00	51.00
Structural-iron worker, plasterer, wall painter, roofer, chimney builder.....	43.50	57.00
Mason, cement worker, chimney builder, industrial.....	48.00	60.00
Electrical machines:		
Electrician, motor power men, armature winder.....	52.50	66.00
Electrician, ordinary, machinemén.....	45.00	57.00
Engineer, fireman, machine tenders.....	43.50	57.00
Other trades:		
Harness maker.....	43.50	57.00
Saddle maker.....	48.00	60.00
Miscellaneous:		
Digger.....	46.80	54.00
Chauffeur, coachman, driver, groom.....	39.00	51.00
Assistant warehouseman, watchman.....	46.80	54.00
Warehouseman, principal.....	51.00	60.00
Gardener, chief; roadbuilder, chief; baggageman.....	48.00	60.00
Superintendent of infirmary.....	48.00	72.00
Helper, infirmary.....	39.00	48.00
Messenger, orderly, yard watchman.....	43.20	51.00
Nursery guardian (<i>de crèche et de garderie</i>).....	42.00	51.00
Orderly, under 18 years of age.....	21.00	42.00
Chemist, assistant.....	54.00	84.00
Laborer, male or female, skilled.....	45.00	51.00
Laborer, male or female, unskilled.....	42.00	48.00
Women doing manual labor in workshops heretofore done by men.....	40.20	45.60
Laundry employees, females.....	36.00	45.60
Garment makers, females.....	31.80	39.00

All these workers, except those classified as "Miscellaneous," when employed by the hour, receive 25 per cent more than normal wages.

In the Department of the Seine committees of employers and employees on July 2, 1919, adopted a scale for an eight-hour day in building and construction trades as follows: Journeyman plumber, zinc roofer, and gas fitter, 20 francs; helper, 14 francs; and street guard, 10 francs per day. In metal construction: Pattern maker and shift foreman, blacksmith, 2.75 francs; hammersmith, 2.15 francs; fitter, locksmith, ironworker, driller, stamper and chipper, riveter, general smith, bellhanger, metal-stairway builder, 2.50 francs; and unskilled laborer, 2 francs per hour. Woodworkers: Carpenter, stair-builder, 2.50 francs per hour.

Collective Agreements Regulating Wages and Hours.

THE Master Printers' Union of France, the French Federation of Bookworkers, and the National Federation of Lithographers, represented by their respective accredited committees, acting under the law of April 23, 1919 (8-hour law), entered into an agreement as of June 11, 1919. The following provisions are selected as the most important ones: Work shall begin and end at a given signal; eight hours shall constitute a day's work; the division of the week's work shall provide for either 45 or 44 hours of work for the first five days and 3 or 4 hours on Saturday; in phototype and similar establishments no arrangement calling for over 9 hours in any one day shall be established.

Until January 1, 1920, certain exceptions were permissible, but overtime shall not exceed two hours per day.

Permanent exceptions in the employment of shopmen, overseers, those doing preparatory and preliminary work, laborers, delivery men, drivers, shop and machine cleaners, etc., are allowable, provided the hours of overtime do not extend beyond two hours of the regular working time of the establishment. Temporary exceptions are allowed in special cases, such as: (1) Seasonal or extraordinary amount of work; (a) 120 hours per year, with a maximum of two hours' overtime per day, (b) 15 Sundays per year; and (2) In national need or in case of actual or imminent accident.

The agreement is valid until January 1, 1922, and unless notice is given by October 1, 1921, it is to remain in force for one year longer.

Regular working hours are between 7 a.m. and 7 p.m. Work between 7 p.m. and 7 a.m. is paid for at 25 per cent above regular wages. However, if the work during the night hours is overtime it is paid for as follows: First two hours, 33 per cent; the following two hours, 50 per cent; and further extra hours, 100 per cent above regular wages. Sunday and holiday work, to 12 noon, is paid for at 50 per cent, and after 12 noon, 100 per cent above regular wages.

Petroleum refineries and warehouses.—An agreement was entered into June 16, 1919, between the national association of employers in the petroleum industry and the General Federation of Workers in Chemical Products. This agreement provides for an 8-hour day or a 48-hour week. Time for computing hours of labor begins as soon as the employee enters the building, and work ceases 10 minutes before the clock strikes the quitting hour. Certain classes of employees are excepted: Overseers, foremen, distillers, watchmen, and delivery men.

Overtime work is paid for at 1.65 per cent of regular wages, and is limited to 100 hours per year.

Agriculture.—An agreement covering the district of Melun, between the employers' association and the agricultural workers' unions, was entered into August 8, 1919. In addition to the minimum wages established an employee is entitled to a garden of five ares (598 square yards) cultivated and fertilized at the expense of the employer, or in default of that, to a compensation of 100 francs.

Wages for general laborers employed at all kinds of work are 10 francs per day; for employees under monthly contracts—drivers and carters—not boarded and lodged, 300 francs per month, and garden; boarded and lodged, 160 francs per month. Wages for other workers are as follows:

Man and wife, farm family (*Ménage de ferme*), 250 francs per month, board and lodging; farm maid, 90 francs per month, board and lodging; women engaged in light work, 0.60 franc per hour; and women engaged in threshing and distilling, 0.75 franc per hour. When performing work equal with men's, women shall receive wages equal to men's.

Overseers, 350 francs per month without board and lodging, or 200 francs with board and lodging.

Shepherds, 350 francs per month without board and lodging, and the shepherd to provide food for his dogs. When the employer boards and lodges the shepherd and provides food for his dogs, wages are reduced to 160 francs.

Tractor operators, 400 francs per month, without board and lodging.

Threshing machine hands, 12 francs per day.

Distillery men, 360 francs per month, minimum—increased wages for higher grades of work.

Those engaged in harvesting are paid twice the usual rate. Men employed at other work on the farm receive 400 francs per month plus a bonus of 50 francs during harvest, and day laborers are paid 16 francs per day. In job work wages are based on general hourly earnings.

The working day of from 5 a.m. to 7 p.m. is abolished, except during harvest, and the regulations issued by the public authorities are to be observed. A weekly day of rest, with other social laws relating

to agriculture, are to be vigorously enforced. Lodging employees in unhealthful quarters is prohibited.

Wages of persons not able to perform a normal day's work are to be determined by the arbitration commission, which shall also see that work beyond their physical strength is not required of such employees. Foreign laborers work under the same conditions as native laborers and are paid the same wages.

A mixed arbitration commission, composed of from three to five members of the district union, is charged with the supervision of this agreement. In case of threatened dispute the commission shall advise with the employer.

This agreement remains in force until June 1, 1920, and in default of notice of its termination, for one year longer. Notice of desired changes shall be filed two months before the expiration of the agreement. No person shall be discharged because of strikes or questions of unionism.

Other agreements.—Agreements have been entered into covering the rubber industry of the Paris district; the boot and shoe industries of Marseille, and undergarment making in Paris. These provide for the putting into operation of the eight-hour law, minimum wages, etc.

Increased Wages for Textile Workers at Lyon, France.

ACCORDING to a report from the American consul at Lyon, France, the strike of textile workers which was called on October 27, 1919, was ended on October 31 by the signing of a new wage agreement. The employers had agreed to a wage advance but stated that they could not guarantee a minimum daily wage without the guaranty of a minimum production. The discussion turned principally on the minimum salary to be guaranteed the workers, reports the consul, and the question was finally submitted to the mayor of Lyon for arbitration. He suggested that in case the mean production established by common consent was not reached "for reasons for which the laborers were not responsible, the minimum price of a day's work should be due just the same. If there is a difference of opinion on this point the difference should be submitted to a mixed arbitration commission." Following this arbitration, which closed the strike of Lyon spinners, the following convention was signed:

1. A study shall be made in each factory as to rates of wages for all articles now being manufactured, or possible of future manufacture, which shall assure a workwoman of average ability and efficiency the following daily earnings: ¹

¹ Owing to fluctuations in the value of the franc, conversions into United States money are not made. Normally the par value of the franc is 19.3 cents.

Daily earnings of textile workers in Lyon, France, under agreement of Oct. 31, 1919.

Women working—	Francs.
With 1 loom, plain.....	10
With 2 looms, plain.....	12
With 1 loom, fancy.....	11
With 2 looms, fancy.....	14
With 1 loom, velvet, plain.....	¹ 12 to 14
With 1 loom, velvet, fancy.....	¹ 14 to 16
Spindlers and other similar skilled workwomen.....	² 9 to 10
Throwers, spindlers, and reelers, skilled workwomen.....	10
Cotton reelers, skilled workwomen.....	² 9 to 10
Boiled-silk reelers and rewinders, skilled workwomen.....	11
Twisters, warpers, and dayworkers.....	12
Male laborer (able bodied):	
Per day.....	15
Per month.....	350

2. These rates will be based on a minimum production which will assure the daily earnings of an average worker under normal conditions of work, it being understood that this minimum production is to be established by agreement between the workmen interested and the employers.

3. Rules governing the spinning of each article should be communicated to the workwoman; this applies also to the verifying of pieces already spun, if she so desire. The method of accomplishing this should be agreed to in each factory by the workers and the employer.

4. In all cases where the minimum production established by agreement is not reached, for causes beyond the control of the workers, a normal day's earnings will still be paid, on condition that the spare time be employed in the service of the factory.

In case of disagreement, the matter in controversy shall be investigated by both parties, and if they can not agree the question shall be submitted to arbitration by a mixed commission.

5. When articles exactly similar are spun in several factories under the same conditions of production the rates shall be identical.

6. For loom setters, capable of supervising the section to which they have been assigned, and for all skilled loom mounters the minimum wage is fixed at 500 francs per month.

If the above-mentioned loom setters and mounters are engaged by the day, the day's wage shall be 20 francs. In this case, all overtime work shall be paid for at the rate of one and one-third times the usual rate.

7. In the future no conflict should take place until the mixed arbitration commission shall have been called upon thoroughly to study and discuss the questions at issue, with a view to avoid further misunderstanding.

¹ According to article.

² According to professional value.

Return to Piecework Rates in Germany.

ONE of the first economic effects of the German revolution was the refusal of German workers to work at piecework rates, and the consequent general decrease in output. It seems, however, that a change of mind has taken place recently with respect to piecework. Soziale Praxis¹ states that Vorwärts, the organ of the Social-Democratic Party, advocates piecework and a bonus system in an article which has received much attention. Payment by results is regarded as being absolutely necessary in State-owned establishments. The output of the railway shops has dropped to such an extent that there are not enough cars to carry even the reduced coal output. The transport crisis can not, however, be regarded as the only or chief explanation of the coal crisis. It may be the reason for the acute shortage which has been experienced at different times and places, but it does not account for the chronic shortage which only increased output can remedy. Nothing could be worse at the present moment, the article states, than to tell the miners that increased output will not avail because of the transport crisis. On the other hand, it is time to put an end to the state of affairs which now prevails in the railway shops. A large proportion of workers would welcome the declaration that in the railway shops some work shall be done in return for good wages. "Vorwärts is right," however, says Soziale Praxis, "when it refrains from confining the question of piecework wages to the railway shop workers but examines it in principle as the present situation demands, and rejects the old saying 'piecework is murder' (*Akkordarbeit ist Mordarbeit*)."¹ Vorwärts states:

Piecework, if reasonably applied, is the most just method for determining wages. The trade-unions have adapted their activities in past years accordingly: they never have waged a fight against piecework as such, but against the abuses to which it is subject. * * * Sensible workers will regard piecework as desirable inasmuch as it will enable diligent workers to earn a much higher wage than under the present time wages system.

In addition to the piecework system, consideration should also be given to the bonus system, which has been opposed in Germany while in Russia it has been advantageously adopted. The current wage rates were retained and standardized in Russia. They constituted the payment for the latest recorded output. Any output over and above this was awarded a bonus in addition to the standard wage. The bonuses were increased progressively. According to the reports received from the Soviet Government on the situation of the labor market, the bonus system has exercised an exceedingly favorable influence on production. In some factories output has increased 25 to 40 per cent in a short period.

The effect of the piecework and bonus systems would be increased if special coupons were given to the workers who exceeded a fixed minimum of work. This would

¹ Soziale Praxis und Archiv für Volkswohlfahrt, Berlin, Sept. 4, 1919, p. 879.

enable the workers to obtain the extra rations allowed to workers in the heavy and most fatiguing industries. In this way a worker who had applied himself with diligence and industry to his task in the interest of the community would be entitled to receive not only a larger number of paper money notes but also a larger supply of necessary foodstuffs, and thus be enabled to renew his strength.

The social-democratic publication is right, says *Soziale Praxis*, when it asserts that the German nation is so sick that it does not hear the doctor's advice to do more work. It needs a daring operation to force the process of recovery. The revolution, which led to the collapse of authority in the management of production, removed many barriers. At first the abolition of piecework was warmly welcomed, as it was thought that in a State in which all the people were imbued with a sense of duty there would be no necessity for any other incentive to work. Now the disappointment is great when it is realized that the sense of duty is not equal in all sections of the community.

Piecework Rates as an Incentive to Work.

IN AN article on piecework rates as an incentive to work,¹ *Soziale Praxis* says:

The introduction of piecework as a means of increasing the zest for work is being vigorously discussed among railwaymen. The reason for this is to be found in the orders issued by the minister of railways. These recommend the strict observance of the eight-hour day and the reintroduction of piecework as a means of combating the prevailing aversion to work in the railway workshops. Discussions have taken place in the Ministry of Labor between representatives of the Government and of the railwaymen's unions on ways and means of increasing the output of the railway shops. The General Union of Railwaymen has called a conference of the executive committee and expert officials to discuss the same problem. The Central League of Officials has also taken up the matter.

The representatives of the workers admit that there is some aversion to work, but the blame does not lie on workers only. To some extent railwaymen are exhausted after the arduous work during the war, and they should have had some rest. Bad materials and unpractical methods of manufacture and work are other causes of diminished output. Attention must therefore not be exclusively centered on the wage system, but an effort should be made to provide good materials and tools. Otherwise the workers would suffer if the piecework system were introduced, and would energetically protest against it. The system could be introduced for new work, but not for repair work.

In spite of this rejection of the piecework principle, the General Union of Railwaymen has declared itself in favor of the piecework system in certain works for a three months' test. The workers maintain that only far-reaching rights of participation in management can be effective in increasing the zest for work.

The right to participate in management should be granted as soon as possible. The minister of railways has issued instructions to the railway administrations that all preparations should be made for elections for the railway works councils to be held as soon as the works council law is promulgated.

¹ *Soziale Praxis* und Archiv für Volkswohlfahrt, Berlin, Sept. 18, 1919, p. 920.

It is not only among railwaymen, but also among other workers, that the value of the piecework system is being realized. In this connection the following award made by the State arbitration board at Brunswick on the occasion of the closing down of an automobile factory is worthy of attention:

The firm shall be entitled to close down its works as long as the economical operation of the works is endangered by the refusal to perform suitable piecework. As soon as the workers declare their willingness to undertake piecework the firm shall reinstate all its former staff. There shall be negotiations between the two parties as to the system of piecework, whether team or individual piecework or the bonus system, which should be adopted.

In some instances workers are returning voluntarily to the piecework system. One firm, Bergmann in Suhl, had given notice of dismissal to all its salaried employees and workers because the diminution of output had made it questionable whether operation could be carried on at a profit. The notices were, however, withdrawn because the workers declared that they were prepared to accept the piecework system. In the Zeiss Optical Works at Jena two votes were taken on the question. The first ballot showed no great inclination on the part of the workers to adopt piecework, but a big majority in favor was obtained on a second ballot.

Production Committees in Railway Workshops.

VORWÄRTS¹ reports that as a result of many complaints of lack of material and tools and against old-fashioned methods in the railway workshops, which, the railwaymen say, have greatly hindered production, the German Ministry of Railways has decided to reorganize the engine and carriage repair shops on a modern basis. The new system secures for the workers a large measure of the desired share in control. In November, 1919, the article states, "production committees" will be introduced in every workshop with the object of increasing output and organizing the work on modern lines.

The production committees will be invested with extensive powers. In each occupational group, for instance, locksmiths, turners, wheelwrights, smiths, clerks, etc., two employees will be appointed to supervise production in collaboration with the existing workers' committee or works council and to suggest reforms. Their duties will be to determine whether each worker is suitably employed and able to perform the required minimum of work; to consult the engineers and directors in individual works with regard to better methods of work and desirable innovations; to keep the stores well supplied so that repairs may not be unnecessarily delayed; and to act as liaison officers between the workshops and factories and the managing directors.

¹ Vorwärts, Berlin, Oct. 30, 1919.

A New Piecework System.

A NEW piecework system in operation in a Government railway repair shop is described in Vorwärts¹ as follows:

The former system of piecework must be considered as a thing of the past. This method, while securing a higher wage to the specially industrious or capable worker, failed to stimulate production as a whole.

A new system, which is of the nature of profit sharing, has led to increased production in the Government's railway repair shops at Golm-Mark. A commission, composed of a works manager, a delegate of the workers, and a railway official, calculates the number of hours necessary for the performance of a certain piece of work, on the basis of actual experience and average production.

While aiming at the highest possible technical perfection, the workers try to carry out the prescribed task in the shortest possible time. By a special scheme the saving in cost resulting from the difference between the actual number of hours worked and the calculated number is shared between workers and employers. Each individual worker is paid according to output and capacity on a scale arranged between the management and the workers. The resulting average of hours and wage rates is that for which payment is agreed upon in the repair contract. If, for instance, the agreed average price per hour is 2.30 marks² plus 180 per cent for general expenses (some such percentage is usually allowed to every firm of contractors as compensation for expenses) the following result will obtain:

A railway freight car, according to the standard calculated, requires 500 hours for repair. The work is actually performed in 408 hours, so that a saving of 92 hours is effected. Ninety-two, the number of hours saved, multiplied by 2.30 marks gives 211.60 marks. The 180 per cent for expenses amounts to 380.88 marks; the sum of the two is 592.48 marks. Half of this sum, or 296.24 marks, goes to the gang of 10 workers employed on the job. The combined wages of these 10 workers for the job in question were 947.90 marks. The extra compensation of 296.24 marks paid to them for the saving in time amounts, therefore, to somewhat over 31 per cent.

Newly employed workers are paid a share of the profits after 12 days' work with their gang. The standard number of hours fixed by the commission is not reduced when the worker receives higher wages.

This system has already been in use in the workshops for four months. As a result production has increased 100 per cent. Another advantage is that the employment of supervisors has become unnecessary. Further, if any member of a gang shows a lazy disposition, the other members refuse to incur the loss of profit involved, and demand his dismissal.

¹ Vorwärts, Berlin, Oct. 4, 1919.

² Owing to fluctuations in exchange value conversions into United States money are not made. The normal par value of the mark is 23.8 cents.

Shorter Working Day in German Coal Mines.¹

ACCORDING to the *Kölnische Zeitung*,² certain representatives of the miners' unions are now opposing the early introduction of the six-hour shift in the coal mines. The *Bergarbeiterzeitung*, the journal of the Free (Social-Democratic) Miners' Union, demands that there shall be an international agreement with regard to the six-hour shift, and calls attention to England, which provides for this shift in 1921 only if the industrial situation allows it. At a meeting of the commission appointed to inquire into the working hours in the Ruhr district the workers demanded that the six-hour shift should be introduced on February 1, 1920, and it was clearly pointed out that if this demand were not acceded to by that date the workers would take by force what was not accorded them as an act of grace. The increasing coal shortage makes it plain that a serious danger lurks in any further curtailment of the working hours. At the beginning of February the shortage will be still more serious, and the necessity of increased output makes the curtailment of working hours out of the question.

The *Bergarbeiterzeitung* examines the question as to which is the country in which the shortest working hours for miners prevail. In France the eight-hour shift, "bank to bank," was made legal from July, 1919; but if national requirements demand it, the Government may, after hearing the views of the employers' and workers' organizations, lengthen the working hours. In Austria the eight-hour shift was introduced in July, 1919, while in Belgium, although no new regulations for the mines have yet been issued, the eight-hour shift also prevails. In Poland the shift below ground is between eight and eight and one-half hours, "bank to bank," while in Russia the eight-hour shift has been introduced by the Soviet Government, though in the Moscow and Don districts the shift is seven and one-half hours.

*Soziale Praxis*³ reports that the commission appointed to examine the question of working hours in coal mines in the Ruhr district met in Essen on December 8 and 9, 1919, and while there seems a prospect of an agreement between the employers and workers as regards certain questions, e. g., the housing problem, the transport system, food and clothing grants for miners, as regards working hours the views of the employers and workers are diametrically opposed.

With regard to the housing problem it was stated that, owing to difficulties that are well known, it will take between three and four

¹ See MONTHLY LABOR REVIEW, January, 1920, pp. 173-177, for an article on the same subject.

² *Kölnische Zeitung* Cologne, Dec. 21, 1919. Morning edition.

³ *Soziale Praxis und Archiv für Volkswohlfahrt*, Berlin, Dec. 18, 1919.

years to provide 70,000 homes for about 100,000 miners. With regard to transport, conditions are comparatively satisfactory, for about 15,000 cars are now available, which are sufficient for the transport of 150,000 metric tons of newly mined coal and 10,000 tons from the dumps, so that by the end of February all the dumps should have been removed.

In the matter of working hours the chairman of the commission, Prof. Gothein of Heidelberg, gave an alarming account of the grave consequences of the coal shortage. Many branches of industry in South Germany, he said, had been obliged to close down and many others would shortly have to follow suit. Electricity and gas works could provide only half their normal output, and many had closed temporarily, with the result that factories had closed and the workers were starving. In Heidelberg gas was being produced from wood, whose acid content injured the gas pipes. The Berlin metal workers had sent a deputation to Essen to beg the miners to produce more coal.

In view of this situation the employers are unconditionally opposed to any curtailment of the shifts, and actually demand their temporary prolongation from seven hours to eight. But the workers cling obstinately to their demand that from February 1, 1920, the six-hour shift must be introduced. Under the old conditions the average life of a miner was only 45 years, and miners now claim that they can not be blamed for desiring to prolong their lives. Justifiable as their claims may be, at the present juncture the country's requirements should take first place. Prof. Francke appealed to the workers to recognize this, and pointed out that should the Ruhr district be occupied by the Entente by reason of nonfulfillment of the treaty terms the miners would probably be compelled to work eight or nine hours, as in the Saar district. Attempts to arrive at a compromise between the two opposed views failed.

MINIMUM WAGE.

Minimum Wage for Women in Hotels and Restaurants in District of Columbia.

By CLARA E. MORTENSON.

THE conference called by the Minimum Wage Board of the District of Columbia to recommend a minimum wage for women employed in hotels, restaurants, apartment houses, clubs, and hospitals on February 3, 1920, reported that \$16.50 a week is the least sum with which a self-supporting woman in the occupations under inquiry can maintain herself according to proper standards. This is the same figure unanimously voted by the mercantile conference¹ on July 12, 1919, as the minimum living wage for women in that industry. The conference on the printing, publishing, and allied industries,² the first conference called by the Minimum Wage Board, on April 8, 1919, unanimously recommended a minimum wage of \$15.50 for women employed in the industries under consideration.

In the conference on the hotel, restaurant, and allied industries unanimity was not obtained. The employers' representatives voted against the recommendations submitted to the board.

The conference held nine meetings before a basis of agreement could be reached. The ordinary difficulties attending a just wage determination were augmented in the industries under consideration by the prevalence of the system of providing employees with room or board, or both, as part of their compensation. Should the existence of this system be recognized? If so, in what way? Three possible methods of solution were advanced during the conference: (1) That the conference should recommend a minimum wage, coupled with the stipulation that whatever accommodations were provided by the employer must be provided in addition to this wage. (2) That the conference should recommend a minimum wage, with the provision that if the employer furnished room or board the amount which he might charge for these accommodations should be agreed upon by the employer and employee in each specific case. (3) That the conference should recommend a minimum wage and also the maximum amounts which an employer who provided room or board might charge for these accommodations.

¹ See MONTHLY LABOR REVIEW August, 1919, pp. 199, 200; October, 1919, pp. 163, 164; November, 1919, pp. 217, 218.

² See MONTHLY LABOR REVIEW, May, 1919, pp. 217-219; July, 1919, pp. 165-167.

The representatives of the employees stated from the beginning that they preferred an all-cash wage. With this wage they would be in a position to eat and live wherever they chose. If an employer provided room and meals for his employees, such accommodations should be in addition to the minimum wage. The employers protested against such an arrangement, their main argument being that it would be practically impossible to prevent the employees who were handling food from eating what they wanted. This large group of workers would thus get their meals at the expense of the employer and have the money allowed for food in the minimum wage rate for other purposes.

The employers, however, were willing to pay an all-cash wage, provided that they could charge their employees for food and room, such charge to be a matter of individual bargaining between the employer and the employee. The workers objected to this scheme on the ground that the superior bargaining power of the employer would leave the actual determination of the charge largely in his hands. The employee would either have to accept his terms or look elsewhere for work.

Determining the Charge for Accommodations.

THE remaining proposition was that a minimum wage rate should be determined and also the maximum amounts which an employer who furnished room or board, or both, to his employees should be allowed to charge for these accommodations. This scheme was generally accepted as the best method of protecting the interests of all parties concerned. But the question at issue was, upon what basis should the fixed charge be determined—cost to the employer or value to the employee.

The representatives of the woman workers contended that the basis should be cost to the employer. They argued that generally speaking it was of advantage to the employer to have his employees live in the establishment. The "living in" system has been opposed for years by the workers and is gradually being broken down, but if in addition to the natural advantage of having the employees on the premises an employer was allowed to make profits on the accommodations provided them, the "living in" system with all its evils would be given a new lease of life. Theoretically, the employee would have the option of taking or leaving the job, but practically the person who controlled the job, the employer, would hold the option. The applicant for work would be told that a certain wage would be paid, from which would be deducted the legal allowance for room and board. Among an unorganized group of workers the tendency would be to accept for the time being the terms offered,

no matter how unsatisfactory they might be, rather than take a chance at finding other work.

The representatives of the employers, on the other hand, held that the basis of determination should be the prevailing rates for similar accommodations in the community. If \$3.50 a week was the least sum for which a woman could secure respectable lodgings, and the conference agreed that it was, then the employer who provided rooms for his employees should be allowed to deduct \$3.50 from the minimum wage. In the same way if \$1 a day, \$7 a week, was the least sum for which palatable and nutritious food could be obtained, and the conference was of the opinion that this was true, then the employer who furnished food to his employees should be allowed to deduct that sum from the minimum wage. In other words, the representatives of the employers held that if in the determination of the cash minimum wage a certain allowance was made for room and board, then that sum should be fixed as the charge which an employer who furnished his woman workers with these items could make.

Real difficulties were presented by the inequalities in food served employees in the different types of establishments and by the inadequacy of some of the rooming facilities provided. It was pointed out that three grades of food were served in the larger hotels, the rank and file of the employees getting the third or poorest grade. The women contended that this food was often unpalatable and even inedible, and they felt that an employer should not be allowed to charge the price of a wholesome meal for food which did not come up to standard. On the other hand, in the small restaurants, tea rooms, and cafeterias only one grade of food was served. In these establishments the employees probably ate more than one dollar's worth of food a day. Therefore a fixed price for a meal served employees would in some instances work a hardship on the employee and in other instances on the employer. Where could the line be drawn so as to secure a maximum of benefit with a minimum of hardship? Final agreement was reached on \$0.30 a meal, \$6.30 for 21 meals a week, and \$2 a week for rent. These figures represent a compromise between the cost to the employer and the value to the employee as measured by prices for which standard accommodations could be secured outside of the establishment.

The mercantile conference reporting in July, 1919, allowed \$4 a week for clothing. It was generally conceded that clothing prices had risen appreciably since that time and with little discussion the employees' estimate of \$4.50 was accepted. The clothing budget was as follows:

1 suit every two years.....	\$17.50
1 coat every two years.....	19.75
8 waists, at \$2.....	16.00
1 dress waist.....	7.00
1 wool dress every two years.....	12.50
1 wool skirt.....	10.00
2 summer skirts.....	5.00
1 dress-up dress every two years.....	15.00
3 hats—summer and winter work hats and dress hat every two years..	14.00
2 wash dresses, at \$8.....	16.00
4 pairs shoes, 2 pairs, at \$8, and 2 pairs, at \$4.....	24.00
3 pairs gloves—1 kid, at \$2.50, and 2 cotton, at \$1.05.....	4.60
12 pairs stockings, at 65 cents.....	7.80
2 corsets, at \$2.50.....	5.00
4 summer union suits, at \$1.25.....	5.00
3 winter union suits, at \$1.75.....	5.25
6 corset covers, at 80 cents.....	4.80
4 nightgowns, at \$1.50.....	6.00
2 white petticoats, at \$1.50.....	3.00
1 dark underskirt.....	3.60
2 dozen handkerchiefs, at 15 cents.....	3.60
8 aprons, at \$1.50.....	12.00
1 kimono.....	2.00
1 purse.....	1.50
1 umbrella every two years.....	1.50
1 pair rubbers.....	1.50
Repairs to clothing (suit, skirt, etc.).....	2.50
Repairing shoes.....	4.00
Neckwear—4 sets, at 50 cents.....	2.00
Miscellaneous.....	2.00
Total per year.....	234.40
Total per week.....	4.51

The two previous conferences had each allowed \$3.20 for sundries. The representatives of the employees asked for a material increase in this allowance, but 50 cents additional was all that was granted. This 50 cents was to cover increased laundry expenses and car fare rates.

Report of the Conference.

THE report of the conference, dated February 3, 1920, is as follows:

To the Minimum Wage Board of the District of Columbia:

The conference on the hotel, restaurant, apartment house, club, and hospital industries having completed its consideration of and inquiry into the subject submitted to it by the board reports its findings and recommendations as follows:

1. The conference finds that the minimum wage for women workers in the occupations under inquiry should be \$16.50 per week, and that any lesser wage is inadequate to supply the necessary cost of living to women workers in such occupations and to maintain them in health and to protect their morals. The figures upon which this wage is based are: Room, \$2; board, \$6.30; clothing, \$4.50; sundries, \$3.70.

2. The conference recommends:

(a) That the wage to be paid to any woman worker in a hotel, restaurant, apartment house, club, or hospital shall be not less than \$16.50 per week.

(b) That where the employer furnishes room or board, or both, to his employees he may make a charge for room of not more than \$2 per week, for board at not more than the rate of \$0.30 per meal or \$6.30 for 21 meals per week.

This report has been unanimously accepted by the Minimum Wage Board. In accordance with the law a public hearing must be held at which any person in favor of or opposed to the recommendations may be heard. The hotel men's section of the Merchants and Manufacturers' Association has signified its intention of protesting against the rates. The representative of the restaurant owners in the conference has refused to join with the hotel men in such protest. With sentiment divided the hearing promises to be a lively one. If, when the hearing is over, the board is still in favor of the recommended rates it will embody them in the form of an order which will become effective 60 days from date. Approximately 3,000 women will come within the scope of such an order.

Minimum Wage Law of Massachusetts.

BY AN act of the legislature of 1919 (chap. 350) the Minimum Wage Commission of Massachusetts went out of existence on November 30 of that year. The act named creates a department of labor and industries into which are consolidated the various State boards and commissions interested in industrial matters.¹ There is to be a commissioner of labor and industries who is the administrative and executive head of the new department. Three associate commissioners take over the functions of the minimum wage commission, and are charged with the executive duties formerly devolving upon the commission.

The commission in its final report expresses the hope that the essential features of the minimum wage work will be continued intact, and that its identity and individuality will be maintained. It says: "The work is distinctly different from that of the other labor boards and commissions with which it is joined. It is concerned directly with a special group—the unskilled, unorganized women and child workers in the State. The wage boards through which it functions involve distinct problems requiring a certain specialization in their treatment."

The minimum wage commission was established in July, 1913. During the six years of its existence wage investigations have been

¹ See pp. 209 to 213 of this issue of the REVIEW for an account of the organization of the new department.

conducted in 23 occupations, in 4 of which a second investigation has been made. In 16 of these, wage boards have been authorized, and in 14 minimum wage rates have been fixed. Inspections during the year showed substantially full compliance with the recommendations of the commission, and also indicate a considerable number of increases in wages paid.

Inspections covered 1,030 establishments, employing 24,815 women. Only 196 cases of violations, or less than 1 per cent of the entire number for whom records were secured, were found. Satisfactory adjustments were secured in nearly every case without recourse to legal action. The difficulty of determining with exactness the advances made on account of the decrees is recognized. However, it is believed that they have been largely beneficial, while in a number of cases employers have anticipated action by the commission by increasing rates of wages immediately following an investigation of their industry, without waiting for a wage board to make recommendations. Indeed, satisfaction is expressed over a changed attitude on the part of employers toward the minimum wage work. The hostility of past years seems largely to have disappeared, and many employers recognize that a minimum wage is to their interest as well as that of their employees, since it is a minimum and not a standard rate, and protects representative employers from unfair competition.

COOPERATION.

The Cooperative Movement in the United States.

By FLORENCE E. PARKER.

THE cooperative movement, or the Rochdale movement, as it is often called, is one of great social significance. It tends to substitute for the present system of private profit taking a condition of society under which every need of life, social and economic, will be supplied by the united effort of all. Though this aim is revolutionary, the method of attainment is gradual and peaceful. The movement is not political but economic. The cooperator as such takes no part in politics. One writer states that "the cooperator exercises his power chiefly through his economic vote, as a consumer."¹

The immediate object of the movement is the reduction of the cost of living by a system of exchange, as nearly direct as possible, between producer and consumer, the middleman and his profits being eliminated. The cooperator may set about to accomplish this object either as a consumer or as a producer. As a consumer the medium through which he works is the cooperative buying club or the cooperative store; as a producer it is some such organization as a farmers' marketing association.

The Rochdale Principles.

CERTAIN features inaugurated by the Rochdale cooperators have been adopted by their successors as guiding principles and characterize the movement wherever it exists. The leaders in cooperative organization continually urge that all societies should rigidly adhere to them. One authority says that failure to conform to these principles "is to abandon the cooperative idea and to invite failure."²

The principles are as follows:

1. Unrestricted membership, with shares of low denomination which may be paid for in installments.
2. Limitation of the number of shares to be held by any one member, to prevent wide inequality in the financial status of members.
3. Democracy in government, and each member limited to one vote, irrespective of the number of shares held.
4. Sale of pure goods at prevailing market prices.
5. Cash sales to avoid the loss attendant upon extension of credit and to enable the society to make the best use of its capital.

¹ Albert Sonnichsen: *Consumers' Cooperation*. New York, Macmillan Co., 1919, p. 196.

² Emerson P. Harris: *Cooperation the Hope of the Consumer*. New York, Macmillan Co., 1918, p. 179.

6. Payment of not more than a legal rate of interest on share and loan capital, the remainder of the "profits" (the surplus over cost price plus expenses of management), after making provision for depreciation, reserve, and educational fund, to be returned as a dividend to members in proportion to their patronage.

History of Cooperation in the United States.¹

STARTED in Rochdale, England, in 1844 by 28 weavers as a means of relief from poverty, unemployment, adulterated food, and extortionate prices, the cooperative movement has remained a distinctly working-class movement, and as such has spread to every continent. The United States was one of the first countries to follow the lead of the Rochdale pioneers. Until recently, however, the cooperative movement has not been particularly successful here, though thousands of enterprises have been started which have had temporary success.

The cooperative spirit in the United States has manifested itself in various ways. Probably the first instance of cooperative purchase was the buying club established in Boston in 1844, out of which grew the powerful New England Protective Union. This organization flourished for a while, but internal quarrels disrupted it, and its place was taken by the American Protective Union. Through the latter, as many as 700 stores are said to have been established in New England.

During the early seventies the Patrons of Husbandry, a farmers' order, established a number of cooperative stores, some of which still exist.

The establishment of communistic colonies was another form taken by cooperative effort. This phase, beginning early in the first half of the century has continued, in sporadic instances, up to the present. Some of these colonies, such as the Amana community in Iowa, the Separatist community at Zoar, Ohio, and the various Shaker communities, were primarily religious. Others, such as the Anaheim and Kaweah cooperative colonies in California were economic in origin. Some of these communities are still in existence. The Oneida community in New York, which began as a communistic religious colony, still survives, but has taken on the character of a joint stock company.

Not all of the early ventures were strictly cooperative in principle and in many cases the cooperative idea was subordinated to some other economic or social theory which caused the failure of the cooperative scheme. This was true of the movement supported by the Knights of Labor about 1884, in which the cooperative feature was incidental to their political program, the failure of which destroyed the stores.

¹ The data on which this section is based were secured from *Consumers' Cooperation*, by Albert Sonnichsen, *Cooperation in New England*, by Prof. James Ford, and U. S. Bureau of Labor Bulletin No. 35.

In 1874 there was established a purely cooperative organization, the Sovereigns of Industry. Stores established by this organization spread all through the North Atlantic coast States. This society failed in 1879 through bad business management.

Toward the end of the century the movement in the United States seemed to have died out. Only a few isolated independent stores remained. Of recent years interest in all lines of cooperative activity, particularly in farmers' marketing organizations and cooperative buying associations, has gradually revived. The most notable examples of the former type of cooperation are found in such associations as the California Fruit Growers' Exchange and the various live-stock shippers' organizations. A detailed discussion of farmers' distributive organizations was given in the MONTHLY LABOR REVIEW for March, 1919 (pp.133-136). The present article will be confined to cooperative buying or consumers' associations.

There are now certain well-defined centers of consumers' cooperative associations. The Pacific coast has a vigorous movement, strongly backed by labor unions, centering about San Francisco and Seattle. Illinois is another center of cooperative activity. In this section the miners have been largely instrumental in making the stores a success. In the Dakotas, the Nonpartisan League has established a chain of stores as a part of its program. The North Central States have a thriving movement centering in the Cooperative Wholesale Society of America, in St. Paul, which combines both the producer and consumer phases of the movement. A good deal of organization work is being done in the vicinity of New York City. The Finns have a large number of stores, all strongly centralized, with wholesale centers at Superior, Wis., and Fitchburg, Mass.

Extent and Character of Cooperative Movement in the United States.

WHILE there seem to be no statistical data relative to the extent of the cooperative movement in the United States, it is estimated that there are about 3,000 consumers' societies, having a combined business of approximately \$200,000,000 a year.¹

The Bureau of Labor Statistics has been making a tentative survey of the cooperative movement and now has data from about 85 consumers' cooperative societies. Though as yet the data are too scattered and incomplete and relate to too small a number of associations to be put into statistical form, they will serve to give a general idea of the character of the cooperative society. The survey includes associations dealing in one or several of the following lines: Groceries, meats, meat products, bakery goods, milk, dry goods, women's clothing, millinery, boots and shoes, students' school sup-

¹ Estimated by the National Cooperative Association, Chicago.

plies, feed, fuel, miners' supplies, grain, fertilizers, spraying materials, lumber, timber products, farm machinery, and hardware.

All except six of the societies reporting as to number of establishments operate only one establishment. Of these, four report that they operate a branch store in connection with a grocery or general mercantile business; one society which does a general mercantile business operates seven branch stores; a Finnish society in New England reports that it operates 12 grocery stores, 2 bakeries, 3 boarding places, and 4 milk stations.

Membership.

The membership of the societies which furnished information as to membership ranged from 35 to 1,700, the average being 427. Most of the societies reporting conform to the open-membership principle. Generally the only requirement—aside from the monetary one—is that the applicant be over 16, or over 18, years of age, or that he be indorsed by a member in good standing. One society makes a somewhat unusual restriction on membership. Its constitution provides that "members of commercial clubs, employers' organizations, manufacturers' associations, retailers' associations, and business men, private detectives, except should they be a member of some labor organization also," shall not be admitted to membership in the society.

Most societies charge a small membership fee ranging, among those reporting, from 25 cents to \$1. In one society this fee was \$5; two others charge \$10.

Number and Value of Shares.

The value of a share of stock ranges from \$5 to \$100, the greatest number reporting the former amount. The significance of this is altered somewhat by the fact that some societies require the purchase of more than one share of stock by each member. With this factor taken into account the capital investment required ranges from \$5 to \$300, the majority of societies requiring \$10. The average for all the societies reporting was \$41 per member. Of course, every factor which tends to increase the amount of money which must be advanced in order to secure membership limits the field from which the society may draw its members, since many persons, though interested in the project, might still be deterred by financial inability from joining. One society whose shares are \$100 each requires that each member hold three. To the average wage earner whom the cooperative movement should benefit this requirement acts as a very effective barrier. About one-fourth of the societies reporting stated that the shares may be paid for in installments.

The number of shares that may be held by one member range from 1 to 200, the greatest number of associations allowing each member

to own 5 shares. The maximum amount that may be invested by any one member ranges from \$10 to \$1,000. In the largest number of cases a member may invest \$100 in share capital. The number of shares per member is limited in some States by the cooperative law. Thus, in Illinois the law provides that no member may own more than five shares or \$500 worth of stock.

Democracy in Government.

Without exception, in the societies studied, the principle of "one member, one vote" is strictly adhered to. Voting by proxy is allowed in only one society. A number of associations allow a member unavoidably absent to vote by mail, provided he is informed as to the matter to be voted on. A great many allow the member's vote to be cast, in his absence, by a member of his family.

Since democracy in government is one of the chief principles of the cooperative society, it is important that as many members participate as possible, and cooperators lay stress on the importance of members' attendance at meetings. About one-third of the societies reporting levy a fine, ranging from 25 cents to \$1, for nonattendance, and one society provides that any member failing, for a whole year, to attend the meetings shall be expelled.

The affairs of each society are managed by a board of directors elected by and from the membership to serve, in the majority of cases, for one year. This board usually consists of five or seven members. In one case, where there are nine directors, the constitution provides that three shall be women. Another association provides that none of its directorships shall be filled by a "business man or profiteer."

Prices.

Of the associations which reported as to prices, all but three sell at prevailing prices. These three state that they sell at "reasonable rates," "operate on a small margin," or on as small a margin "as is consistent with safety."

Sales.

Though it is the policy of the stores reporting to sell only for cash, in practice members are allowed credit to the amount of from two-fifths to four-fifths of their paid-up capital stock. Three-fifths of the paid-up capital stock seems to be the usual amount of credit granted. Usually, in addition, credit is given to the full amount of the member's loan capital. One society, which allows credit up to four-fifths of stock, states that it does not recommend this as a safe course to pursue, although it has worked very well in their case. One association allows credit, amount unspecified, for six months; another allows it to the amount of \$40, and this must be paid by the tenth of the following month.

The average monthly sales of the societies reporting on this point range from \$2,359 in one small society which had at the time of reporting been in business less than a year to \$78,450 in a society having about 1,700 members, which has been established since 1890. The average sales of all the societies reporting amounted to \$13,315 per month. This average is probably too large to be representative of the typical small cooperative society, since the societies which reported on this point were, for the most part, societies with a large membership and some operated more than one store.

Rates of Interest, Provision for Reserve, etc., and Dividends on Purchases.

The rate of interest paid by the societies reporting ranged from nothing, in two cases, to 10, in one case. In only one instance, a Michigan society, was more than the legal rate of interest paid. In several of the societies, the first two or three shares of each member's stock are held as working capital and bear no interest, the legal rate being paid on all shares in excess of those numbers.

Practically every society provides for a reserve fund to meet unexpected losses. The amount annually set aside for this fund is based upon the surplus, and ranges from 1 to 50 per cent. In most of the societies the annual appropriation for reserve is 10 per cent or under. Many societies provide either that when the reserve reaches the sum of \$30,000, or when it amounts to 30 per cent of the capital stock, no further additions to the fund shall be made.

In the cooperative movement, emphasis is laid on the importance of educational and propaganda work, and many associations regularly appropriate a certain percentage of the surplus for this purpose. In the societies studied this percentage ranged from 2 to 50 per cent.

Cooperative societies generally sell to nonmembers as well as members, but they do not always include nonmembers in the return of dividends. Where dividends are returned on the purchases of nonmembers they are usually at one-half the rate received by members, though some of the societies state that they pay up to three-fourths of the members' rate. In some associations the nonmember's dividend is not paid to him but is applied on a share of stock so that in time he automatically becomes a member of the society and is entitled to the full rate of dividend.

Some societies also arrange with private stores for a discount on purchases made by their members.

Benefits of the Cooperative Society.

The cooperative stores probably have little, if any, effect in lowering prices in their community, since, as has been noted, most of them sell at prevailing market prices to avoid arousing the enmity of the private dealer. The practical effect of price reduction, however, is

obtained by means of dividends, which are declared quarterly or semiannually.

The dividend is the member's share of the "profits," that is, of the sum remaining after deduction from the surplus of the amounts to be set aside for education, reserve, and depreciation funds. The dividend is computed not upon the capital stock but upon the total sales, and is distributed in accordance with the amount purchased by each member. Thus the member whose purchases at the store have amounted to \$100 during the quarter would receive, on a 6 per cent dividend, \$6.

The dividends returned to members on purchases ranged from 3 to 10 per cent. One large society, mentioned above, states that it has never paid less than 8 per cent and has paid as high as 13 per cent. The average dividend for the stores reporting was a little over 7 per cent.

Only three of the stores reporting as to the amount of dividend deal exclusively in groceries. These reported dividend returns of 4, 6, and 9 per cent on purchases. In the investigation made by the Bureau of Labor Statistics in cooperation with the National War Labor Board of the cost of living in 92 industrial centers it was found that the average annual expenditure for food of 3,959 families with yearly incomes of \$1,200 and under \$1,500, amounted to \$515.55.¹ On such an expenditure the cooperator would receive as his yearly dividend \$20.62 from the store paying a 4 per cent dividend, \$30.33 from the one paying 6 per cent, and \$46.40 from the one paying 9 per cent. The expenditure for food of 2,730 families with yearly incomes of \$1,500 and under \$1,800 was found to be \$571.75.¹ On purchases to this amount the dividend received from the three stores would be \$22.87, \$34.30, and \$51.46.

It must be borne in mind, however, that probably in most cases members would not buy all of their food supplies from the cooperative store. The above dividends, therefore, are the maximum receivable, the amount actually received being determined by the proportion bought at the cooperative store.

The average dividend paid by the societies dealing in general merchandise ranged from 3 to 8 per cent, the average being 6 per cent. Assuming the term "general merchandise" to cover the items listed by the Bureau in its cost-of-living study as "food," "clothing," and "furniture and furnishings," the average expenditure for general merchandise of the industrial wage earners' families was found to be \$784 for those having an annual income of \$1,200 and under \$1,500 and \$907.44 for those having an income of \$1,500 and under \$1,800. At the rate of a 6 per cent return on this expenditure, assuming

¹ MONTHLY LABOR REVIEW, August, 1919, p. 118.

again that all purchases for merchandise were made at the society's store, the yearly dividend would amount to \$47.04 and \$54.45.

Besides this monetary benefit the cooperator receives other advantages through his membership in the society. Prof. Ford emphasizes¹ that the cooperative movement provides values not readily obtainable from other sources:

(1) It provides important practical education in business methods for adult wage earners. (2) It provides training for citizenship. Questions of broad policy are inevitably discussed in meetings of cooperative associations. This discussion develops knowledge, ability to understand and to handle men which renders the cooperator valuable in public service. (3) It discovers what Prof. Marshall calls "our greatest waste product," namely, the latent abilities of workingmen, and utilizes those latent abilities not only in the fields of business and citizenship, but throughout the entire range of social conduct. (4) It habituates men to altruistic modes of thought and of conduct. The motto "Each for all and all for each" finds daily expression in cooperative activities. The more a man buys from the cooperative shop the more he stabilizes the business and increases his profits and his neighbor's dividends. (5) It not only increases the income of individual members, but creates a collective capital which can be used on occasion to free the working classes from any form of exploitation.

¹ Distributive cooperation, by James Ford. Address delivered at National Conference of Social Work, 1917, Pittsburgh, Pa.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in January, 1920.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in January, 1920, from representative establishments in 13 manufacturing industries. Comparing the figures of January, 1920, with those of identical establishments for January, 1919, it appears that in 10 industries there was an increase in the number of persons employed, while in 3 there was a decrease. The greatest increases—54.2 and 51 per cent—appear in men's ready-made clothing and woolen, respectively, and the largest decrease—24.9 per cent—is shown in car building and repairing.

Eleven of the 13 industries show an increase in the total amount of the pay roll for January, 1920, as compared with January, 1919, and 2 show a decrease. The most important percentage increases—149.5, 125.8, and 73—appear in men's ready-made clothing, woolen, and automobile manufacturing, respectively. A decrease of 21.5 per cent is found in car building and repairing.

The large increases over last year are due in part to the decline in the fall and winter of 1918-19 caused by the cancellation of Government contracts and uncertain industrial conditions following the signing of the armistice in November, 1918. In men's ready-made clothing in November, 1918, there was a falling off of 1.4 per cent in the number of employees and 4.6 per cent in the amount of the pay roll as compared with October, 1918. The comparison of December, 1918, with November, 1918, shows a decrease of 2.7 per cent in the number of employees and an increase of 5.8 per cent in earnings. In January, 1919, as compared with December, 1918, there was a decrease of 8 per cent in the number on the pay roll and a decrease of 3.7 per cent in the amount of the pay roll. In woolen for January, 1919, as compared with December, 1918, there was a falling off of 18.1 per cent in the number on the pay roll and 25.2 per cent in the amount of the pay roll.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JANUARY, 1919,
AND JANUARY, 1920.

Industry.	Estab- lish- ments report- ing for Janu- ary, both years.	Period of pay roll.	Number on pay roll in January—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in January—		Per cent of in- crease (+) or de- crease (-).
			1919	1920		1919	1920	
Automobile manufacturing.	36	1 week..	78,126	107,559	+37.7	\$2,091,674	\$3,617,749	+ 73.0
Boots and shoes.	65	do.....	51,624	56,610	+ 9.7	1,110,203	1,395,794	+ 25.7
Car building and repairing..	55	1 month.	66,766	50,109	-24.9	3,887,252	3,050,049	- 21.5
Cigar manufacturing.	56	1 week..	18,273	17,492	- 4.3	291,278	365,467	+ 25.5
Men's ready-made clothing.	36	do.....	13,314	20,530	+54.2	267,892	668,517	+149.5
Cotton finishing.	17	do.....	12,762	15,868	+24.3	211,367	398,024	+ 64.9
Cotton manufacturing.	52	do.....	43,532	45,341	+ 4.2	709,333	945,075	+ 33.2
Hosiery and underwear.	65	do.....	30,709	34,182	+11.3	442,355	647,200	+ 46.3
Iron and steel.	97	1 month.	191,486	174,797	- 8.7	13,250,085	12,378,710	- 6.6
Leather manufacturing.	33	1 week..	15,449	18,025	+16.7	339,439	466,443	+ 37.4
Paper making.	50	do.....	27,588	28,734	+ 4.2	596,765	747,149	+ 25.2
Silk.	49	2 weeks.	17,787	21,099	+18.6	626,094	957,632	+ 53.0
Woolen.	49	1 week..	29,123	43,975	+51.0	507,706	1,146,242	+125.8

Comparative data for January, 1920, and December, 1919, appear in the following table. The figures show that in nine industries there was an increase in the number of persons on the pay roll in January as compared with December, and in four a decrease.

The largest increase in the number of people employed appears in iron and steel, 12.4 per cent. Decreases of 3.4 and 2.6 per cent are shown in cigar manufacturing and car building and repairing, respectively.

In comparing January, 1920, with December, 1919, nine industries show an increase in the amount of money paid to employees and four a decrease. The most important increases are 13.7 per cent in iron and steel and 12.4 per cent in automobile manufacturing. Cigar manufacturing and car building and repairing show respective percentage decreases of 7.8 and 6.4.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN DECEMBER,
1919, AND JANUARY, 1920.

Industry.	Estab- lish- ments report- ing for Decem- ber and Janu- ary.	Period of pay roll.	Number on pay roll in—		Per cent of in- crease (+) or de- crease (-).	Amount of pay roll in—		Per cent of in- crease (+) or de- crease (-).
			Decem- ber, 1919.	Janu- ary, 1920.		Decem- ber, 1919.	Janu- ary, 1920.	
Automobile manufacturing.	37	1 week..	100,098	105,053	+ 5.0	\$3,161,276	\$3,553,941	+12.4
Boots and shoes.	59	do.....	51,492	52,123	+ 1.2	1,287,310	1,323,272	+ 2.8
Car building and repairing..	55	1 month.	51,443	50,109	- 2.6	3,258,785	3,050,049	- 6.4
Cigar manufacturing.	56	1 week..	18,288	17,663	- 3.4	399,345	368,363	- 7.8
Men's ready-made clothing.	44	do.....	17,704	17,981	+ 1.6	543,347	575,283	+ 5.9
Cotton finishing.	17	do.....	16,020	15,868	- .9	403,807	398,024	- 1.4
Cotton manufacturing.	52	do.....	43,772	43,506	- .6	395,684	910,103	+ 1.6
Hosiery and underwear.	61	do.....	32,012	32,097	+ .3	594,328	609,071	+ 2.5
Iron and steel.	99	1 month.	158,067	177,674	+12.4	11,099,157	12,615,643	+13.7
Leather manufacturing.	31	1 week..	16,926	17,238	+ 1.8	432,517	443,736	+ 2.6
Paper making.	50	do.....	28,458	28,734	+ 1.0	731,641	747,149	+ 2.1
Silk.	47	2 weeks.	20,067	20,178	+ .6	918,390	916,316	- .2
Woolen.	49	1 week..	45,553	47,407	+ 4.1	1,181,265	1,227,862	+ 3.7

In addition to the data presented in the above tables as to the number of employees on the pay roll 86 plants in the iron and steel industry reported 147,426 employees as actually working on the last full day of the pay period reported for January 1920, as against 156,327 for the reported pay-roll period in January, 1919, a decrease of 5.7 per cent. Figures given by 87 establishments in the iron and steel industry for January, 1920, and December, 1919, show that 147,893 employees were actually working on the last full day of the pay period reported for in January, 1920, as against 131,054 for the period in December, 1919, an increase of 12.8 per cent.

Changes in Wage Rates.

DURING the period December 15, 1919, to January 15, 1920, there were establishments in 11 of the 13 industries which reported increases in wage rates. Of the establishments reporting, many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

Automobile manufacturing: Twenty per cent of the employees in one establishment received an increase of 10 per cent, and 9.5 per cent of the men in another plant received an increase of 8.25 per cent. One concern granted a 4 per cent increase to 12½ per cent of their help. In one establishment 40.6 per cent of the employees received an increase of 2.48 per cent, while 5 per cent of the force in another shop were granted a wage increase of 2 per cent. Two establishments reported a few individual increases but made no further statement.

Boots and shoes: Ten per cent of the employees in one firm were granted a 12½ per cent increase. Three firms gave increases of 10 per cent affecting all of the force in two plants and 25 per cent of the men in the third establishment. An increase of 9¾ per cent, affecting 16⅔ per cent of the employees, was reported by one plant. One establishment gave an 8 per cent increase to 10 per cent of their help and paid 20 per cent of the men a bonus of 7½ per cent on wages earned the preceding three months. A few small individual increases were reported by one concern but no further data were given.

Cigar manufacturing: One factory reported a 12 per cent increase but made no further statement. One establishment gave increases ranging from 5 to 10 per cent to 98 per cent of the employees. All of the men in one concern received an increase of 7½ per cent. An increase of about 2 per cent, affecting 4½ per cent of the force, was reported by one concern.

Men's ready-made clothing: Five establishments granted a 20 per cent increase affecting all of the employees in three firms, 90 per cent of the force in the third plant and 75 per cent of the men in the

fourth concern. An increase of 17 per cent, affecting $82\frac{1}{2}$ per cent of the employees, was given by one establishment. All of the employees in one concern were given an increase of 15 per cent and the entire force of another establishment received increases ranging from 10 to 15 per cent. One firm reported an increase of 9.71 per cent but made no statement concerning the number of men affected.

Cotton finishing: An increase of $12\frac{1}{2}$ per cent, affecting all of the employees, was reported by one establishment while another concern gave a 2 per cent increase to all of their force.

Cotton manufacturing: One establishment reported a 16 per cent increase but made no statement as to the number of men affected. All of the employees in three plants received a 10 per cent increase and the entire force in another plant was granted an increase of 9.1 per cent. One concern reported an increase of $8\frac{1}{3}$ per cent, affecting 99 per cent of the help.

Hosiery and underwear: One establishment granted an increase of 15 per cent to all of the employees. Two firms gave a $12\frac{1}{2}$ per cent increase to the entire force, and two other mills reported a $12\frac{1}{2}$ per cent increase in wage rates but failed to give the proportion of the help affected. An increase of 11 per cent, affecting all of the men, was given by three concerns. All of the employees in one mill received an increase of about 10 per cent while six establishments granted 10 per cent increases, affecting all of the men in four plants, 90 per cent of the employees in the fifth mill, and 25 per cent of the force in the sixth establishment. One concern reported an increase in wage rates but made no further statement.

Iron and steel: One plant reported individual increases of about 10 per cent. Fifty per cent of the men in one establishment received increases ranging from 2 to 10 per cent, and all of the employees in another plant were granted a $6\frac{1}{4}$ per cent increase. One concern reported an increase of about 6 per cent affecting 60 per cent of the force and a $2\frac{1}{2}$ per cent increase to the other 40 per cent of the employees. The entire force in one mill was granted a 5 per cent increase. All of the men in one mill received an average wage increase of $4\frac{1}{2}$ per cent. Two plants reported a $2\frac{1}{2}$ per cent increase, affecting about 20 per cent of the employees in one concern and one-third of the force in the other. Forty-two per cent of the employees in one establishment received an increase, the puddle mill tonnage men receiving an increase of 2.2 per cent and the finishing mill tonnage men a 1.2 per cent increase. All of the force in one plant was granted an increase of 0.1428 per cent, and the wages of all the employees in another concern were increased 30 cents per day. One establishment reported an increase of 0.0233 per cent, affecting 75 per cent of the force, and 41 per cent of the men in another plant.

received an increase of 0.019 per cent. One establishment reported an increase but made no further statement.

Leather manufacturing: Six per cent of the men in one establishment received a 15 per cent increase. One firm gave a 10 per cent increase to all of the employees while the entire force in another plant was granted an increase of $7\frac{1}{2}$ per cent. A 5 per cent increase, affecting 50 per cent of the men, was reported by one concern. One establishment paid a bonus to all full-time workers.

Paper making: Eighty-five per cent of the employees in one establishment received an increase of $12\frac{1}{2}$ per cent. Two firms gave a 10 per cent increase affecting the entire force and all of the men in another concern were given an increase of approximately 10 per cent.

Silk: One establishment reported an increase of about 20 per cent affecting about one-half of the employees. All of the force in one mill was given a $12\frac{1}{2}$ per cent increase. Seven concerns granted an increase of 10 per cent, affecting all of the men in the first two plants, 90 per cent of the force in the third, 79 per cent in the fourth, 50 per cent in the fifth, 7 per cent in the sixth, and 3 per cent in the seventh. One concern gave a 5 per cent increase to 20 per cent of the employees, and another firm paid a 5 per cent bonus to the entire force. An increase was reported by one mill but no further information was given.

Employment and Unemployment in Great Britain in 1919.

A REVIEW of employment and unemployment conditions in Great Britain in 1919 is contained in the January issue of the British Labor Gazette. It is stated that in the early part of 1919 there was a large amount of transitional unemployment due to changing over from war to peace conditions, which was most severely felt by semiskilled and unskilled munition workers, large numbers of whom had been drawn from other industries, while many others—particularly women—have not previously been occupied in wage-earning employments. For most classes of skilled workers employment remained fairly good. While not an exact measure of the volume of unemployment, the out-of-work donation statistics give a fairly accurate index to conditions, showing the improvement which took place in the spring and summer. From the beginning of the year until early in March the number of those in receipt of out-of-work donations increased from 625,149 civilians and 53,554 ex-service men, to 753,982 civilians and 306,263 ex-service men. An improvement then set in among civilians, the number of policies

current decreasing to 137,637 on November 21, three days before the termination of the civilian donation. However, the number of ex-service men out of employment continued to increase until the maximum of 409,959 was reached on May 9. A steady decrease then set in continuing until September, when the number was 302,272. In October the number increased to 344,242 in November to 353,909, and on January 2, 1920 had reached 383,095.

The great amount of unemployment among women in the early months of the year may be illustrated by analyzing the figures for March 7, the date of maximum civilian unemployment. On that date the number of persons recorded as unemployed in connection with the donation scheme for civilians was 790,521, of whom 234,402 were men, 27,356 boys, 494,365 women, and 34,398 girls. The maximum of unemployment as regards ex-members of H. M. Forces was May 9, when the figures reached 409,959.

It is stated that the percentage of unemployment among members of trade-unions paying unemployment benefits was highest in December, being 3.2 per cent, the mean for the year being 2.4 per cent, and that this mean was the highest since 1914 when it was 3.3 per cent. It was, however, less than the average in prewar years—from 1905 to 1914. It is explained in this connection that skilled men permanently engaged in their trades form a relatively large proportion of the members of these trade-unions, and that the unemployment in the early part of 1919 was largely unemployment of semiskilled and unskilled workers who were discharged from industries which they had only entered for the purposes of the war. These figures, therefore, may not fully indicate the amount of unemployment occurring under such abnormal circumstances as prevailed in the first half of 1919. They also take no account of short time.

Employment and Unemployment Conditions in France.¹

THE first industrial census taken of the invaded districts of France was made by the Office of Industrial Rehabilitation as of July 1, 1919. Questionnaires were sent to establishments which under normal conditions employed 20 or more persons each. From two departments only (Nord and Ardennes) were returns received which furnished sufficient data for the purposes of the investigation. Of these questionnaires, 1,045 and 201 were returned from the two departments named, and 276 from other departments. Of the establishments returning these questionnaires, 706, or 46.3 per cent, have resumed operations. The number of persons employed in

¹ Bulletin du Ministère du Travail. Paris, June-July-August, 1919, pp. 273-278 and 310-313.

industrial labor in these establishments in 1914 was 397,140, and in 1919, 38,682, or 9.7 per cent. There were also 53,419 civilian workers and 13,276 war prisoners engaged in clearing away débris and in reconstruction work, making a total of 105,377 persons employed.

The following table shows the industrial situation as to employment, July 1, 1919, as compared with 1914:

NUMBER OF ESTABLISHMENTS EMPLOYING 20 OR MORE PERSONS, AND NUMBER OF CIVILIAN WORKERS EMPLOYED IN THEM, 1914 AND JULY 1, 1919.

Industry.	Establishments.			Number of civilian workers employed.				Per cent of employees in 1914 in industry on July 1, 1919.
	Number reporting.	Resuming operations.		In 1914.	July 1, 1919.			
		Number.	Per cent.		In reconstruction work.	In the industry.	Total.	
Mines and mineral pits.....	23	8	34.7	69,551	10,694	1,491	12,185	2.1
Quarries.....	16	13	181.2	896	271	226	497	125.2
Food preparations.....	118	39	33.0	12,191	1,667	1,265	2,932	10.3
Chemical.....	53	22	41.5	9,908	3,054	1,189	4,243	12.0
Rubber, paper, cardboard.....	14	6	142.9	13,419	2,577	1,608	4,185	11.9
Printing.....	33	21	63.6	3,744	164	1,208	1,372	32.3
Textiles.....	373	143	38.6	140,396	10,688	11,664	22,332	8.3
Clothing.....	36	21	158.3	4,758	108	1,099	1,237	23.1
Leather and hides.....	26	14	153.8	3,018	224	996	1,220	33.0
Woodworking.....	81	45	55.5	6,784	439	1,204	1,643	17.7
Metallurgy.....	33	16	48.4	25,530	4,003	948	4,951	3.7
Base metal working.....	415	192	46.2	70,153	10,776	9,763	20,539	13.9
Precious stones and fine metals.....	1	1	100.0	134	(²)	40	40	29.9
Stone dressing.....	26	20	176.9	1,735	66	512	578	29.5
Excavating and stone construction.....	138	80	57.9	9,145	5,005	2,290	7,295	25.0
Stone and earthenware.....	136	65	29.4	25,678	3,673	3,179	6,852	12.3
Total.....	1,522	706	46.3	397,140	53,419	38,682	92,101	9.7

¹ Computed; not shown in original table taken from the report.

² Not shown in report.

Of the total civilian workers engaged in removing débris and in repair work 14,410 were foreign workmen, nearly all of whom were Belgians. These foreign workmen formed 15.6 per cent of the total number of workers employed in both reconstruction and industrial work. The number of wounded and invalided soldiers employed formed but a small portion, 1,036.

City of Paris.

BASED on a recent report on the operation of the municipal unemployment fund of Paris, published in the Bulletin of the French Ministry of Labor, unemployment in the city of Paris continues to decrease. The report states that the number of persons in receipt of benefits decreased from 67,370 during the period April 30 to May 15, 1919, to 29,629 in the two weeks ending August 19; that in the same periods, respectively, the amount of the unemployment benefits paid fell from 2,990,245 francs ¹ to 1,324,363 francs. The amount of State aid granted the fund was 1,828,127

¹ Owing to fluctuations in the value of the franc, conversions in this article are not made into United States money. Normally, the par value of the franc is 19.3 cents.

francs in the former period, but it was reduced to 808,962 francs in the two-week period ending August 19.

Comparing the average number of persons in receipt of benefits in the period April 27 to August 16, 1918, with the period April 30 to August 19, 1919, the report shows that there were more than four times as many in receipt of unemployment benefits in 1919 as in 1918 and that the disbursements increased from 1,315,386 francs in 1918 to 14,379,095 francs in 1919, or about 993 per cent.

The following table presents comparative figures for corresponding periods of 1918 and 1919:

NUMBER OF UNEMPLOYED PERSONS RECEIVING BENEFITS, TOTAL DISBURSEMENTS AND STATE AID TO UNEMPLOYMENT BENEFIT FUNDS, IN SPECIFIED PERIODS OF 1918 AND 1919.

Item.	Apr. 27 to Aug. 16, 1918.	Apr. 30 to Aug. 19, 1919.	Per cent of in- crease.
Average number of unemployed receiving benefits.....	11,258	46,025	308.81
Men.....	1,872	27,186	1,352.24
Women.....	9,386	18,839	100.71
	<i>Francs.</i>	<i>Francs.</i>	<i>Francs</i>
Total disbursements.....	1,315,386	14,379,095	993.14
State aid.....	433,374	8,777,749	1,925.44
Expense to city of Paris.....	882,012	5,601,346	535.06

During the first period the State paid 33 per cent of the total disbursements for unemployment grants. On January 15, 1919, the State assumed 75 per cent, which has considerably changed the ratio of distribution for the two periods.

The following table shows the extent of unemployment by industries for the two periods August 1 to 16, 1918, and August 4 to 19, 1919.

NUMBER OF PERSONS, BY INDUSTRY AND SEX, RECEIVING UNEMPLOYMENT BENEFITS, IN PARIS, AUGUST 1 TO 16, 1918, AND AUGUST 4 TO 19, 1919.

Industry.	Aug. 1 to 16, 1918.			Aug. 4 to 19, 1919.			Increase.		
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
Food preparations.....	73	105	178	1,084	640	1,724	1,011	535	1,546
Building and public works.....	261	93	354	2,014	107	2,121	1,753	14	1,767
Textiles and clothing.....	186	3,027	3,213	1,393	3,026	4,419	1,207	1	1,206
Art and jewelry.....	111	327	438	808	452	1,260	697	125	822
Printing.....	97	182	279	626	373	999	529	191	720
Woodworking and furniture manufac- turing.....	151	212	363	1,182	369	1,551	1,031	157	1,188
Chemicals and ceramics.....	35	147	182	529	237	766	494	90	584
Hides, leather, rubber.....	90	220	310	701	561	1,262	611	341	952
Mechanical and electrical.....	102	130	232	1,955	1,077	3,032	1,853	947	2,800
Mines and metallurgy.....	55	58	113	1,837	1,525	3,362	1,782	1,467	3,249
Commerce and banking.....	290	710	1,000	2,392	1,320	3,712	2,102	610	2,712
Liberal arts.....	194	580	774	734	578	1,312	540	12	538
Domestics, etc.....	298	3,011	3,309	1,901	1,989	3,890	1,603	1,022	581
Unclassified.....	4	1	5	117	101	218	113	100	213
Total.....	1,947	28,713	10,750	17,273	12,355	29,628	15,326	3,552	18,878

¹ Decrease.

² This total is taken from the original report. The total of the column is 8,803.

It is stated that the increase in 1919 was due to demobilization. It is shown that unemployment has been steadily growing less during the year.

The labor exchanges (*commissions paritaires*) have canceled the names of a large number of persons appearing on the roll as beneficiaries and have endeavored to find employment for them. Of the total receiving benefits—namely, 322,180—the number thus dropped by the commissions, in the period April 30 to August 19, 1919, was 63,424, and the number who secured employment was approximately one-half of the number dropped—36,093 or 56.9 per cent. The number of beneficiaries dropped from the roll by reason of their having secured employment was 11.2 per cent of the total number receiving benefits.

Unemployment in Germany.

ACCORDING to the *Kölnische Zeitung*¹ the *Reichs-Arbeitsblatt* reports that unemployment increased in Germany during November, 1919. Reports received by the German Statistical Office from 31 trade-union federations, with a membership of 4,538,921, show that in that month 131,193 members, or 2.9 per cent, were unemployed. In October, 1919, 32 federations reported 110,626 (2.6 per cent) members as out of work, and in November, 1918, 31 federations reported 26,144 (1.8 per cent) members unemployed. The greatest increase of unemployment was reported by the building trades unions, 4.7 per cent against 1.9 per cent in October. The textile workers' federation, on the other hand, reported a decrease of unemployment from 7.4 per cent in October to 6.5 per cent in November, and the transport workers' federation a decrease from 2.6 to 1.1 per cent, respectively. The number of persons receiving unemployment grants on December 1, 1919, was 388,300 (291,501 males and 96,799 females). Statistics of the employment offices show that for every 100 vacant situations there were 173 male and 129 female applicants, as against 150 and 115 in October, 1919, and 74 and 101 in November, 1918.

Conditions in the Baking Industry.

AN ARTICLE in *Soziale Praxis*² calls attention to the superabundance of apprentices in the German baking industry at the present time. In 28,745 baking establishments there are 19,625 journeymen and 21,831 apprentices, i. e., 111 of the latter to each 100 of the former, whereas in 1909 the respective proportion was 44 to 100. Employers are apt to encourage the taking on of apprentices, since they are able

¹ *Kölnische Zeitung*, Cologne, Dec. 29, 1919.

² *Soziale Praxis und Archiv für Volkswohlfahrt*, Berlin, Dec. 23, 1919.

to make a larger profit on their labor. The result has been a large increase of unemployment in the industry, which has caused many qualified bakers and confectioners to seek work in other industries. According to the *Reichs-Arbeitsblatt*, 12,543 bakers and confectioners were out of work in September last. This led to the workers' organizations insisting in the case of all wage scale agreements that clauses should be inserted limiting the number of apprentices. Employers who will not employ journeymen, but accept apprentices with a view to making increased profits are not to be allowed to take apprentices in future. The employers are, however, opposed to such clauses since they see in the apprentice system an opportunity of enriching themselves, for the employment of apprentices reduces their outlay for wages.

Unemployment in the Hotel and Restaurant Industry.

ACCORDING to *Soziale Praxis* (December 20, 1919), there is no industry in which unemployment is more rife than in the hotel and restaurant industry. Various measures are being adopted to combat this unsatisfactory state of affairs. In Berlin so-called compulsory holidays for hotel employees have been instituted, every employee who has occupied his present situation for six months being obliged to take a week's leave between July and December. In Nuremberg, with the assent of the conciliation board, it has been ordered that waiters and waitresses engaged during the war must be laid off for three months and replaced by unemployed and prisoners of war who have returned home. In Hamburg it has been ordered that every married waiter should receive 700 marks per month (basic wage and percentages), and every unmarried waiter 550 marks. In cases where the percentages exceed these amounts an extra waiter is to be employed for each 700 or 550 marks.

WOMEN IN INDUSTRY.

Annual Report of Women's Service Section, United States Railroad Administration.

AN ACCOUNT was given in the MONTHLY LABOR REVIEW, March, 1919 (pp. 209-212), of the establishment and work of the Women's Service Section, having charge of the wages and working conditions of women employed by the railroads of the country. The annual report of the Director General of Railroads devotes a section to the work of this division during the past year.¹

The work of the women's section has been particularly devoted to improving working conditions, especially in regard to health, comfort, and proper hours of work, and to insuring a fair application of the wage orders so that there should be no discrimination against the women.

The highest point in the employment of women was reached in October, 1918, when there were 101,785 employed by first-class roads, an increase of 66 per cent in the first nine months of 1918, and of 225 per cent from the beginning of the war. Although this number has decreased since that time, there are still many more employed than before the war. There are two causes which have operated to bring about the reduction in the number of women employees: First, the return of soldiers and sailors, who were reinstated according to seniority, and second, the general reduction in labor force on the railroads caused by the necessity for economy and which resulted in women being laid off in many cases because of their lower seniority rights. Recently, however, there has again been a slight increase in the number of women employed.

The eight-hour day has been put into effect in an increasing number of cases. Out of a total of 12,908 women covered by inspections of the women's service section, working in all classes of work, 90 per cent were working 48 hours or less in 1919, as against 70 per cent in 1918. Improvement in the number employed on night work, that is, employment on shifts beginning or ending between 6 p. m. and 6 a. m., is also noted, there being but 4.2 per cent of the total number working at night. These were mainly telephone switchboard operators in private exchanges and clerks. But 8 per cent of the total number scheduled, mainly car cleaners, were employed 7 days per week.

¹ Annual report of Walker D. Hines, Director General of Railroads, 1919, Division of Labor. Washington, 1920, 84 pp.

Beginning last October, however, seven days' work is allowed only every other week.

Much progress also is reported in improving working conditions, especially in the provision of rest rooms which can be used at need as lunch rooms, dressing rooms, or for first-aid. The best results, it is said, have been achieved where a special supervisor of women employees has been installed and during the past year and a half, nine of the roads, most of them large systems, have engaged women supervisors.

Wage increases have been effective for women as well as men. The following table shows the rates of pay for clerical workers:

RATES OF PAY PER MONTH FOR WOMEN EMPLOYED AS CLERICAL WORKERS.

Item.	Employees whose rates of pay per month are—										Total.
	\$45 and under \$50	\$50 and under \$60	\$60 and under \$70	\$70 and under \$87.50	\$87.50 and under \$95	\$95 and under \$105	\$105 and under \$115	\$115 and under \$125	\$125 and under \$135	\$135 and over	
Number.....	43	287	137	223	5,317	977	1,953	731	241	185	30
Per cent.....	0.4	2.8	1.4	2.2	52.5	9.7	19.3	7.2	2.4	1.8	0.3
											100

The monthly rates of pay for women in other classes of work are shown in the following table:

RATES OF PAY PER MONTH FOR WOMEN EMPLOYEES IN VARIOUS CLASSES OF RAILROAD WORK.

Occupation.	Number of employees whose rates of pay per month are—									
	\$39 and under \$40	\$40 and under \$45	\$45 and under \$50	\$50 and under \$60	\$60 and under \$70	\$70 and under \$80	\$80 and under \$90	\$90 and under \$100	\$100 and over.	Total.
Office girls and messengers.....		2	7	35	28	24	5			101
Telephone operators (switch-board).....					11	133	67	21	5	227
Matrons and supervisors.....				5	24	34	21	4	3	91
Cleaners and janitresses.....		12	2	13	18	112	31	15	6	209
Restaurant employees.....				6	17		1	1	11	36
Crossing watchwomen.....				4	27	12	3			46
Miscellaneous.....						4	5	7	8	24
Laundresses.....	27	4	28	76	57	20	24	1		237
Seamstresses in linen rooms.....			10	10	21	10	9	8	1	69
Total.....	27	18	47	149	193	349	166	57	34	1,040
Per cent.....	2.6	1.7	4.5	14.3	18.5	33.6	16.0	5.5	3.3	100

¹ At \$69.

The lowest rates of pay are found among the laundresses and seamstresses, whose rates correspond closely with commercial rates. In general, however, railroad work has been very popular with women because of the prevailingly high wages as compared with pay in other positions. The standardization of rates has been carried to such an

extent that the "rate is put on the position and not on the person," with the result that the women have been put to a real test of capacity. That they have not always measured up to the standard, it is stated, is because during the war emergency there was not time to make careful selection and many had to be taken in with insufficient training.

In regard to the future possibilities of advancement toward the more responsible positions in the railroad industry, the writer of the report says:

Testimony from their superiors indicates that women will undoubtedly progress further in all forms of work. While in some offices there is hesitation in encouraging them to advance into the more responsible positions, in other offices there is distinct effort to put no obstacle in their path, in fact they are being urged to bid on the higher positions. While some officials are still testing out the capacities of their women employees, others are emphasizing the need of training as the only requisite for further advancement.

INDUSTRIAL ACCIDENTS.

Accidents on Steam Railroads in the United States in 1918.¹

STATISTICS of accidents on steam railroads in the United States in 1918 are presented by the Interstate Commerce Commission in its Accident Bulletin No. 70, recently issued. The commission's rules governing monthly reports of railway accidents divide accidents into three primary groups, namely: Train accidents, train-service accidents, and nontrain accidents. The commission defines train accidents as those arising in connection with the operation of trains, locomotives, or cars in road, yard, or work service, resulting in damage to equipment or other railway property.

Train-service accidents are defined as those, incidental to the operation of trains, locomotives, or cars, which result in casualties to persons but not in damage to equipment or other railway property. They include casualties due to coupling or uncoupling cars or car connections; to getting on or off, falling from, being struck by, or doing work about trains, locomotives, or cars not in shops or engine houses; to coming in contact, while on or getting on or off moving cars or locomotives, with any fixed structure above or at the side of track; and other like accidents not causing damage to the train itself or to other railway property.

Nontrain accidents include those occurring in and around shops, on boats and wharves, at stations, freight houses, engine houses, coaling stations, water stations, tracks, etc.; also those occurring in connection with construction or with repair, painting, or other maintenance work on buildings and other structures, and with the construction and maintenance of equipment, except such running repairs as may be made by trainmen en route. They do not include accidents occurring directly in connection with the operation of trains, locomotives, and cars, on rails.

In reports of injuries to persons the commission prescribes the following distinctions:

1. Any person killed in an accident at the time of its occurrence, or so severely injured as to die within 24 hours thereafter, should be reported as "killed."

¹ United States. Interstate Commerce Commission. Bureau of Statistics. Collisions, derailments, and other accidents resulting in injury to persons, equipment, or roadbed, arising from the operation of railways used in interstate commerce. October, November, and December and year 1918. Washington, 1920. 64 pp. Accident Bulletin No. 70.

2. With regard to injuries not resulting in death within 24 hours after the occurrence of an accident, the following rules are to be observed: (a) Employees incapacitated from performing their ordinary duties for more than three days, in the aggregate, during the 10 days immediately following the accident, are to be reported as "injured;" those incapacitated for only three days or less are not to be reported; (b) persons other than employees are to be reported as "injured" if the injury is sufficient, in the opinion of the officer making the report, to incapacitate the injured person for a period of more than one day from following his customary vocation.

The rules further provide that only accidents arising from the operation of a railway which cause either the death or the injury of a person as limited above or cause damage to railway property in excess of \$150 (including cost of clearing wreck) are reportable.

In the interest of uniformity, it is unfortunate that the rules noted above do not conform to those laid down by the committee on insurance and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions,¹ which prescribe certain standard definitions applicable to the reporting of industrial accidents. For example, any person who dies as the result of injuries should be reported as killed even though death occurred after an interval of 24 hours from the time of the accident. Also, the committee prescribes that all accidents and injuries arising out of the employment and resulting in death, permanent disability, or in the loss of time other than the remainder of the day, shift, or turn on which the injury was incurred, should be reported. In the definition above it will be noted that employees incapacitated three days or less are not to be reported. Section (b) in the definitions of the Interstate Commerce Commission is very indefinite, and increases the confusion by establishing a different standard for injuries to employees and to other persons.

The following table is a summary of the accidents reported for the calendar year 1918:

CASUALTIES TO PERSONS ON STEAM ROADS IN THE UNITED STATES FOR THE YEAR ENDED DECEMBER 31, 1918.

Class.	Passengers and persons carried under contract.		Employees, including those not on duty.		Other persons (trespassers and nontrespassers).		Total.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Train accidents.....	286	4,655	554	4,251	156	499	996	9,405
Train-service accidents.....	233	3,427	2,448	43,403	5,020	7,909	7,701	54,739
Nontrain accidents.....			491	108,457	98	1,974	589	110,431
Total.....	519	8,082	3,493	156,211	5,274	10,382	9,286	174,575

¹ See MONTHLY REVIEW for October, 1917, for report of this committee.

INDUSTRIAL HYGIENE AND MEDICINE.

Health Hazards in Certain Industries of New York State.

Industries of Niagara Falls.

HEALTH hazards in the industries of Niagara Falls is the title given to the description by Paul M. Holmes, in a recent number of Public Health Reports,¹ of the results of an investigation conducted by the United States Public Health Service. The investigation was brought about by a letter from the secretary of the employers' association of Niagara Falls to the Commissioner of Labor Statistics, United States Department of Labor, dated June 27, 1918, asking permission of the Federal Government to introduce women into "shift work," which, as it involved working between the hours of 10 p. m. and 6 a. m., was prohibited by the New York State law. The request was referred by the Commissioner of Labor Statistics to the newly created Woman in Industry Service of the Department of Labor, and the Service decided to associate with it in the work other Federal agencies. A committee on hazardous occupations was formed, with a membership representing Federal agencies concerned with women in industry and with the health of the civilian population, federal departments having a direct or indirect interest in contracts in the chemical industries, and the New York State Department of Labor. This committee decided that a field investigation was necessary and appointed a subcommittee which supervised the field work and met at frequent intervals with a consultant staff, which was composed of Dr. Alice Hamilton, of the Bureau of Labor Statistics, Prof. C. E. A. Winslow, Dr. David Edsall, and Dr. W. Gilman Thompson, United States Public Health Service. The field staff was detailed by the Public Health Service to Niagara Falls to study and report upon (1) the hygiene and sanitation in the plants, making recommendations for correcting faulty conditions; and (2) the extent to which women might be employed if war conditions should necessitate their going into the plants in increasing numbers.

This report is limited to summarizing the field workers' findings on the hygiene and sanitation in the individual plants, the answers to the question raised as to the employment of women in the industries

¹ Health hazards in the industries of Niagara Falls, N. Y., by Paul M. Holmes. In Public Health Reports, issued by the United States Public Health Service, Washington, January 2, 1920. Pp. 1-20.

having been dealt with in a report of the Woman in Industry Service, entitled "Proposed employment of women during the war in industries of Niagara Falls."¹

The inquiry conducted by the field force extended from August 10 to September 10, 1918. The detailed written reports covered the following points for each department and process of each plant: The nature and construction of the buildings; the ventilation, humidity, dust, fumes, gases, illumination, infection hazards, specific poisons, extremes of heat or cold, noises, and odors; the personal service facilities, such as toilet, washroom, locker, eating, drinking, and rest-room accommodations; the medical and surgical care of employees, including physical examinations and first-aid practice; hours of work, fatigue, absenteeism, and labor turnover; transportation facilities to and from work; and the educational measures used to prevent occupational ailments among workers. It is explained that the individual plant reports, covering the above points and containing detailed and specific recommendations for removing health hazards, were sent to the respective plant executives.

The investigation covered the 21 plants represented in the employers' association. With the exception of a few plants, this number includes all the industrial establishments in Niagara Falls. The following table shows the number of employees in these plants, which are grouped by products manufactured:

NUMBER OF EMPLOYEES IN 21 INDUSTRIAL PLANTS OF NIAGARA FALLS,
GROUPED BY PRODUCTS MANUFACTURED.

Products manufactured.	Number of plants.	Number of employees.		
		Men.	Women.	Total.
Abrasives.....	3	1,734	490	2,224
Chemicals and gases.....	8	2,242	8	2,250
Electrodes and carbon.....	3	1,230	19	1,249
Metals and alloys.....	4	2,667	33	2,700
Miscellaneous.....	3	650	132	782
Total.....	21	8,523	682	9,205

Summary of Hazards Encountered.

The report contains a summary of the study of each of the five groups. In the abrasive industries the chief hazard is dust and this hazard, in the opinion of the writer, was "by far the most serious of any of the industrial health hazards in Niagara Falls." The three plants investigated cover the entire industry in Niagara Falls. Two manufacture crude abrasive material, which is shipped to other places to be made into commercial articles; the third makes

¹ This report was reviewed in an article published in the MONTHLY LABOR REVIEW for June, 1919, pp. 231-246.

both the crude material and the finished product. It was found that all employees are exposed to dust in varying amounts; not even the office force escapes. Tables are given showing nationalities of the workers of these three plants and the dust content of air in a lathe room, in a shaving room, in the grinding room, and in the plant offices and laboratories. Characteristics of the abrasive dust are that the particles are very hard, being second only to the diamond in this quality; and that they are insoluble in ordinary acids or fluids, and are from 95 to 100 per cent inorganic material. The particles are exceedingly jagged and sharp, according to photomicrographs of samples. This dust is very injurious to the lungs, as when once inhaled it is never removed. One to five years are required for the effects of it to develop. The main reason assigned by the report for workers not showing marked ill effects from this dust is that the labor turnover was so large that hardly any workers in the very dusty processes remained long enough to acquire serious damage to their lungs.

In the group of plants manufacturing chemicals and gases (90 per cent of their products being for war purposes), fumes and gases—particularly chlorine gas, hydrogen gas, and caustic fumes, nitrous oxide and benzol fumes—dusts, and caustic burns are the chief hazards, but on the whole the conditions regarding protection from these were comparatively good and were being improved.

In the manufacture of electrodes and carbon compounds a dust, "in no way comparable, as far as detrimental effects to the respiratory system are concerned, to the abrasive dusts" mentioned in connection with the abrasive industries, and heat from the furnaces, are the most objectionable conditions.

In the plants manufacturing metals and alloys the hazards are excessive heat, furnace gases, and dusts. "In none of the plants in the other groups are such large numbers of workers exposed to high temperatures as in this electrothermal industry." In no instance was any provision made to reduce the heat by water screens, heat chains, fans, or other devices. Carbon monoxide and carbon dioxide were hazards in two plants, and phosgene was not adequately removed in one plant.

In the miscellaneous group the hazards were chiefly lead and brass poisoning and sulphuric acid fumes.

Only 1 plant employed a full-time physician; 2 plants employed one physician each on part time; 18 called a physician in case of accident, sickness, or any emergency that the first-aid agent could not handle. Physical examinations were made in three plants, but not according to any set plan. Employees in the dusty processes of one abrasive plant were examined physically every three months by two

first-aid men, neither of whom was a physician. These examinations were supervised by the doctor. In no instances were employees examined before employment, and, with the one exception mentioned, none at regular intervals after employment.

The general average of labor turnover per month for the five-month period preceding the survey was found to be 25 per cent in the abrasive industry, 24 per cent in chemicals, 58 per cent in the electrical industry (1 plant for four weeks), 40 per cent in metals and alloys, and 53 per cent in one plant classed as miscellaneous.

It is an interesting and significant fact that one plant in the group manufacturing chemicals, having a grading of "good" with regard to hygienic conditions in the plant and excellent personal service facilities, had the lowest labor turnover—approximately 12 to 15 per cent per month—while another plant in the same group graded as "poor" had the highest turnover, or 33 per cent per month.

The prevailing hours of work were found to be 10 in the abrasive industry (75 per cent of the employees); 9 in chemical plants (60 per cent of the employees); 9 and 10 in the electrode plants (52 per cent of the employees); 8 and 12 hour shifts in the metals and alloys group (60 per cent of the employees); and 9 and 10 hours per day in the miscellaneous group (85 per cent of the employees).

Results of the Survey and Recommendations.

In April, 1919, two officers of the Public Health Service were detailed to Niagara Falls to see what action had been taken concerning the recommendations for improvement of plant hygiene and sanitation which had been made several months before to each plant executive. They found that a number of the recommendations had been put into effect, including the following: In abrasive plants, marked changes and extensions in the dust-collecting system; in the carbon and electrode plants, dust-collecting apparatus and drinking fountains; and in the other plants, varying improvements.

The following excerpt from the report summarizes the recommendations suggested by the survey:

In view of the great number and the seriousness of the health hazards in the industries of Niagara Falls, it is imperative that permanent and full-time supervision of the physical condition of the workers and work places be instituted. This, in the opinion of the writer, can be best accomplished by an industrial hygiene unit, located in Niagara Falls.

The following is a tentative outline of the organization and functions of such a unit:

At the head of the unit is the advisory board consisting of two representatives each from the employers, the employees, the medical society, and the chamber of commerce, together with the local health commissioner and the local factory inspectors. As executive head and directly under the advisory board comes the director, a physician, preferably trained or experienced in industrial hygiene, and emphatically of executive ability. The director's force should consist of one physician, two industrial nurses, one industrial hygienist (nonmedical), and one mechanical engineer.

The functions of the organization may be briefly set forth as follows:

1. To make physical examinations of the workers engaged in the hazardous occupations;
2. To make plant inspection, to carry on research work, and to make specific recommendations for removing hazards;
3. To work cooperatively with the hospitals; to have charge of the occupational disease clinic;
4. To carry on educational work for the prevention of occupational diseases; and
5. To cooperate in work with the United States Public Health Service, the New York Department of Labor, the New York Department of Health, the local department of health, the local medical staff, employment departments, the local medical societies, etc.

To meet the expenses of a unit of this kind it is suggested that the most satisfactory plan would be to have it financed on a pro rata basis by the manufacturers of Niagara Falls. The size of the unit could be definitely fixed and it is recommended that the members of the organization should be selected for permanent and full-time duty. Most of the Niagara Falls plants are too small to consider the employment of a full-time physician, and, in some instances, even a nurse, declares the report.

A medical organization with engineering personnel that will direct physical examinations of employees to note physical defects, analyze jobs, and place workers where they are best fitted to do a full day's work without injury to themselves, study the occupational hazards, give care to those injured or made ill by such hazards, and adopt engineering plans for their elimination, will find the monetary outlay insignificant as compared with the reduced cost in production and the increased output.

The Chemical Industry.

AN ACCOUNT of the health hazards of the chemical industry in New York State, with recommendations for remedying the various conditions which have been found to be dangerous to employees and employers alike, are set forth in a bulletin¹ recently issued by the New York Industrial Commission. A brief historical survey of the industry is given, and reference is made to the fact that 89 per cent of all the electrochemical products made in the United States are manufactured along the banks of the Niagara River, where power from the Niagara Falls is available. The chemical industry, however, is carried on quite extensively in other parts of the State. The products of this industry "are so vast and numerous and involve so many processes that it would be an impossibility in this bulletin to point out and describe all operations in which risks occur, it being the intention to show some of the most commonly occurring accidents for which remedies to prevent their occurrence may be applied." It is suggested that in some of the

¹ Health hazards of the chemical industry, New York Industrial Commission Special Bulletin No. 96. Albany, November, 1919, 69 pp. Illustrated.

plants the average workman knows little or nothing of the nature or effect of the substances which he constantly handles, "this ignorance being fostered by some manufacturers for the purpose of protecting their secrets from their competitors or keeping the men at work in positions which they would refuse to hold if they realized the dangers of their occupations. Many of the materials are referred to only as 'dope,' 'stuff,' 'liquor,' or by initials which have no relation to the name or real composition of the material."

The report notes first the danger arising from the use of artificial lights, particularly open gas lights, although electric lights also cause explosions under certain conditions.

Heating constitutes another hazard, some factories being found in which salamander stoves are used without any means being provided to convey to the outer air the products of combustion. In a majority of cases, however, steam is used as the heating medium and here the danger lies in the possibility of volatile and inflammable material coming into contact with the heated pipes. To avoid this the use of screens is suggested.

In the course of the survey made by the industrial commission it was found that many cases of occupational poisoning were definitely traceable to the lack of adequate ventilation of factory work-rooms, the employees being compelled constantly to inhale deleterious materials arising from machines or mixing and packing processes. It is regarded as most important that a proper system of ventilation be provided to eliminate health and fire hazards by removing dust, gases, vapors, and fumes arising in the various processes used in the particular industry.

It was pointed out that workers in chemical factories are subjected to the danger of accidents from the same general causes as workmen in other classes of manufacture, but in addition they are subject to the danger of burns from acids or molten metal, the corrosive effect on the body tissues of caustic alkalis, alkaline earths, and chromium salts, and the poisonous effects of the inhalation of certain dusts, gases, fumes, and vapors. The breaking up, by means of sledge hammers, of hard, heavy, or tenacious material presents a serious eye hazard. There is also danger to the eye where caustic soda, metallic sodium, sodium peroxide, oxide of lime, ammonia, and chlorinated lime are handled or used. Dermatitis, especially of the hands and arms, is mentioned as a common malady among the employees in color works. Here also droppings from trays on which the workers carry material become dried and are soon reduced to a powder, thus constituting a serious dust hazard.

Toxic Effect of TNT Due to Inhalation of Fumes.

The bulletin states that one important fact brought out by the investigation is the repudiation of the statement made by many writers both in America and England that the toxic effects of TNT are due solely to absorption of the finished product through the skin or to the inhalation of the material in dust form. It was found that the majority of cases of illness from this substance was due to inhalation of the fumes generated through the nitration of the toluol, the fumes of the first nitration (mononitrotoluol) apparently being the most dangerous.

The report gives a brief statistical summary of 7,139 accidents in three factories employing 3,607 workers. Of the total injuries 1,245, or 17.4 per cent, were eye injuries, and 1,081, or 15.1 per cent, were caused by burns. About 36 per cent of the injuries are classed as lacerations.

Brief attention is given to the hazard caused by handling carboys. The fire hazard is an important one in chemical industries. Chemical reaction—changes which take place when certain substances are brought together—furnishes a long list of materials which may produce fire. Friction, shock, static sparks, and the carrying of matches may be the causes of fire. The report gives a list of materials which should not be stored together indiscriminately lest a fire result.

Reference is made to unsafe practices—carelessness on the part of employees. This applies to any industry, “but in the manufacture of chemicals the workers are exposed not alone to the hazards met with in ordinary manufacturing lines, but to the additional ones created by the handling of acids, poisonous materials, and hot liquids, and here above all other places short cuts and the game of chance (the unsafe way) usually fail.”

The report concludes with nearly four pages devoted to 33 recommendations for remedying the hazards to which chemical workers are exposed. Generally speaking these recommendations pertain to the installation of safety valves on devices in which pressure is carried, and of a lighting system of such a type as to prevent ignition of any gas, vapor, or dust which is present or may be generated or produced; prohibition of practice of lowering electric light globes into tanks, etc., in which vapors, fumes, gases or dust are present; prohibition of the use of salamander stoves unless adequate means is provided for conveying the products of combustion out of the factory; installation of radiators or steam pipes used for artificial heating purposes so that a space of not less than 2 inches shall be left between the wall and the radiator or steam pipe; the wearing of suitable goggles by all employees engaged in breaking, chipping, crushing, or grinding hard or tenacious material, and the wearing of

masks or goggles when acids, alkalies, or dangerous or poisonous chemicals are used; the provision of drowning tanks containing plain water, or a solution of bicarbonate of soda in all places where acids are handled or used; the provision of shower baths in the ratio of one for every 20 employees where substances which have an irritating or corrosive effect on the skin are made, handled, or used; the tagging of all valves; provision of powder shoes or shoes with rubber soles, and of wooden shovels and sieves, in all factories manufacturing or handling explosives; prohibition of the carrying of matches, etc., into any factory where explosives, oxidizing agents, or inflammable gases or liquors are made or handled. The recommendations further provide that all employees shall be made acquainted with the nature of the materials with which they work; that explosives or substances having powerful oxidizing qualities or substances in which chemical combination may generate heat, flame, or gas, shall not be stored in rooms or closets in such manner that they may fall or become combined and create a fire or explosion; that suitable protection from the glare of the arc shall be provided for those required to look into furnaces in the electro-chemical industry; the prohibition of fires or furnaces, except under certain restrictions, within the same building with inflammable liquids; the installation of suitable and effective sprinkler systems in all plants engaged in the manufacture of TNT or certain other explosives; the maintenance of suitable and approved first-aid kits; the prohibition of smoking in any building, or on any premises connected therewith, in which explosives or inflammable liquids or gases are manufactured, handled, used, or stored.

The report contains a brief bibliography, though not complete, of works consulted in connection with the investigation.

WORKMEN'S COMPENSATION.

Investigation of Oregon Industrial Accident Commission.

THE interference by industrial accident commissions with the business of damage-suit lawyers continues to bear fruit in complaints against accident funds and investigations of them. The latest report to come to hand is one on the industrial accident commission of Oregon. It appears that an attorney had gone to the widow of a workman killed by accident and secured from her a contract based on a considerable percentage of the compensation award to be sought from the accident commission. When this came to the knowledge of the commission it took pains to see that the payment should reach the beneficiary and not the attorney, which was in accordance with the intention of the legislature in enacting the law. The attorney thereupon set about finding causes of complaint and publishing charges against the commission. This, with perhaps other incidents, led to the appointment of a committee representing employers, employees, and the public to make an investigation of the affairs of the commission.

The report of this committee, bearing date of January 10, 1920, describes the efforts made by it to run down all complaints and charges in an effort to determine their merits. The active aid and assistance of the commission was rendered freely. It was found that there were some technical violations of the law, not going to the merits of its administration, but really attaining more satisfactorily the desired ends. The case that furnished the largest amount of criticism was given special attention. It was found to be quite difficult from a legal standpoint, and it was concluded that "the commission used its best judgment at the time, and acted with proper intent, and that no serious criticism is justified." Quite the same conclusion was reached in other cases which were given considerable newspaper notoriety, and the recommendation concerning them was that further effort be made to ascertain the final results of the injuries with a view to a possible reopening of the cases.

Although wide notice was given of the purpose of the committee to consider all complaints, "less than a dozen requests all told have been made by those who wanted to appear before it with either complaints or suggestions." The attorney most active in presenting complaints submitted "some specific and a good many general

charges," but upon detailed investigation so many of these were found to be "without substantial foundation that the committee was inclined to attach very little importance to either the complaints or the suggestions."

Recommendations were made for an improved accounting system and a closer following up of accounts. However, the funds are reported as in a healthy condition, with reasonable surplus. Means of securing early payments to injured men were also recommended, as well as legislative action looking toward higher compensation awards. The commission was found not to be guilty of any misconduct, and the charges against it were in the main declared to be groundless. Suggestions for educational work to make the provisions of the law better understood, for some improvement in administrative methods, and for a periodical review of the administration of the fund by an independent commission, which should hear complaints and make recommendations for improvements, conclude the committee's report.

The fund showed assets amounting to \$2,878,484 on July 1, 1919, and premium receipts from employers up to December 31 of \$1,271,564. Employees contributed \$96,194. Oregon is the only State in which employees contribute to the regular compensation funds, the rate being 1 cent for each day worked. Interest, a State appropriation of \$207,428, and some other items bring the total assets and receipts for the half-year up to \$4,545,248. From this were paid benefits amounting to \$504,551, medical aid, \$201,460, and funeral expenses, \$8,700. Administrative expense during the six months amounted to \$91,780.

On December 31 the ledger assets were \$3,858,542, with a net surplus of \$668,808, a gain of \$426,996 in surplus during the six months.

New Chairman of California Industrial Accident Commission.

AT A meeting of the California Industrial Accident Commission, held on January 24, 1920, Will J. French, second member of the commission, was elected chairman to succeed A. J. Pillsbury, who retired from that position following an agreement that the chairmanship should rotate. Mr. Pillsbury remains a member of the commission. These gentlemen have been associated in connection with the administration of the Workmen's Compensation, Insurance, and Safety Act of California since the date the act became effective on September 1, 1911, and in assuming the duties of the office the new chairman paid high tribute to the faithful services rendered by Mr. Pillsbury.

Comparison of Canadian Workmen's Compensation Laws.¹

By CARL HOOKSTADT.

WITH the single exception of Prince Edward Island, all of the Provinces of Canada, including the Dominion Government, have enacted workmen's compensation legislation. The law of Saskatchewan, however, although designated in its title as a workmen's compensation law, is merely an employer's liability act, and is therefore not included in the following discussion. The Dominion act provides that if a Federal employee (Government railroads excepted) sustains an injury he shall receive the same compensation as any other person would under similar circumstances receive under the law of the Province in which the accident occurred. Administration of the Dominion act is placed in the hands of the provincial boards, and any compensation awarded may be paid by the Dominion Minister of Finance.

Chronologically, Canadian legislation practically parallels that of the United States. The first law was enacted by British Columbia in 1902, followed by Alberta in 1908, Quebec in 1909, and Manitoba and Nova Scotia in 1910.² These early laws were patterned after the British act and were really modified employers' liability laws. No administrative commissions were provided, and usually suits for damages were permitted. A radical departure from the British type of law, however, took place in 1914, when Ontario enacted the first of the collective-liability compensation acts prevailing in most of the Provinces at the present time. These laws were patterned upon the mutual liability idea of the German workmen's compensation system and upon the exclusive State fund plan of the Washington act. Nova Scotia enacted a similar law in 1915, followed by British Columbia in 1916 and by Alberta and New Brunswick in 1918.

Canadian and American Laws Compared.

AN ANALYSIS of the Canadian laws shows a number of striking characteristics and of deviations from the American type of compensation act. Some of the more important of these are the following:

1. In Canada there is a remarkable uniformity among the several compensation laws. This uniformity applies to the scope of the acts, benefits, injuries covered, administration, and procedure. In

¹ Section of a forthcoming bulletin on Comparison of workmen's compensation laws in the United States and Canada. This comparison includes 1919 legislation.

² In the United States the Federal compensation act was passed in 1903, while Montana enacted a compensation law in 1909 and New York in 1910, though these early State laws were later declared unconstitutional.

the United States compensation acts are distinguished more for their dissimilarity than for their uniformity.

2. In Canada all of the laws are compulsory upon the employers coming within the scope of the act. In the United States only 13 are compulsory while 32 are elective.

3. In Canada the scope of the law in each Province (Yukon excepted) is limited to enumerated hazardous employments. There is some diversity in the number of such employments, but the principal hazardous industries are covered, including manufacturing, mining, construction, and transportation. In the United States only 13 States limit their scope to the so-called hazardous industries, while 32 States cover the "nonhazardous" as well as the "hazardous" industries.

4. In Canada occupational diseases are compensable in every Province except Quebec and Yukon. Such diseases, however, are limited to those enumerated in the statutory schedule. In the United States only 6 of the 45 State laws include occupational diseases, but in these 6 States all occupational diseases are covered.

5. In Canada all of the Provinces except Manitoba, Quebec, and Yukon have exclusive State insurance funds. In Ontario, however, employers under schedule 2 (municipalities, railroad, express, telephone, telegraph, and navigation) are permitted self-insurance. In the United States only 8 of the 45 States have exclusive State funds, while 9 have competitive State funds.

6. In Canada probably the most significant characteristic of compensation legislation is the assumption of liability on the part of the Province. Injured workmen are paid direct by the workmen's compensation board out of the accident fund. This is true, irrespective of whether or not the employer has contributed his premiums to the fund and even if the employer is insured or carries his own risk. Failure on the part of the employer to meet his compensation obligations does not deprive the injured workman or his dependents of compensation benefits. This obligation is assumed by the accident fund, which in turn has redress against the defaulting employer through an action at law. Under none of the laws in the United States does the State assume liability. In case of insolvency of the employer and insurance carrier the injured employee loses his compensation benefits.

7. In Canada the workmen's compensation boards have exclusive and final jurisdiction over all compensation matters, no appeal to the courts being permitted except in New Brunswick and Nova Scotia. In these two Provinces appeal may be had to the Supreme Court upon questions of law, but only with the permission of the judge of said court. In none of the States of America does the administrative commission have final jurisdiction. In every State appeal may be had to the courts upon questions of law and in many of the States upon questions of fact.

8. In Canada members of the workmen's compensation boards hold office during good behavior, except that in British Columbia the term of office is 10 years. In most of the Provinces, however, they are subject to compulsory retirement at the age of 75. Each board is authorized to appoint its officers and employees and to fix their salaries. The term of office of such employees is subject to the pleasure of the board. In the United States the term of office of compensation commissioners is usually 3, 4, or 5 years.

9. As regards liberality, the benefits of the Canadian laws are about on a par with the more liberal of the American acts. The scale of benefits is considerably lower, but on the other hand the periods for which benefits are paid are much longer. In Canada compensation is usually paid during disability or until death or remarriage of the widow, while in most of the States the compensation periods terminate at the end of 300, 400, or 500 weeks. In none of the Provinces (Yukon excepted) is the waiting period over 1 week, and in most of the laws compensation when payable begins from the date of the injury, whereas in the United States 7 States have a waiting period of 10 days and 13 States of 2 weeks. In all of the Canadian laws the amount of compensation in case of disability is 55 per cent of the employee's earnings, except that in Quebec the percentage is 50; in the United States 20 States have a percentage of 60 or greater. The early Canadian laws did not provide for medical benefits, but some of the Provinces have recently made provision therefor; in the United States 42 of the 45 States provide medical service. All but five of these States, however, place some limitation upon the amount of the medical service which the employer is required to furnish.

Compensation and Insurance Systems.

ALL of the Canadian laws are compulsory upon employers coming within the scope of the act. In the five Provinces of Alberta, British Columbia, New Brunswick, Nova Scotia, and Ontario¹ all employers must contribute to the accident fund. Quebec and Yukon Territory have no State fund nor are employers in these jurisdictions required to insure. Manitoba has a hybrid system. Employers are required to insure in private casualty companies or provide self-insurance. Such insurance companies or self-insurers, however, must contribute to the accident fund. They must also contribute 7½ per cent of their premiums to the administration fund.

Out of these accident funds, which are managed by the workmen's compensation boards, are paid all compensation claims. The board

¹ Except employers enumerated in schedule 2, which includes municipalities, and railroad, express, telephone, telegraph, and navigation companies. Employers in these industries are individually liable, though they must deposit funds with the board, which pays the compensation direct to the injured employee.

classifies the industries according to the hazard, fixes and collects premiums, receives and investigates claims, grants awards, and pays the compensation benefits. As already noted, the workmen's compensation board assumes liability. Injured workmen are always paid direct by the board from the accident fund irrespective of whether or not the employer is insured or carries his own risk. Failure on the part of the employer to meet his compensation obligations does not deprive the employee of his compensation benefits. This obligation is assumed by the accident fund, which in turn has redress against the defaulting employer through an action at law.

Scope or Coverage.

THE scope or coverage of the Canadian laws is more restricted than that of most of the American acts. In all of the Provinces (Yukon excepted) the employments covered are limited to enumerated hazardous industries. Agriculture and domestic service are universally excluded. Most of the laws also exclude outworkers, traveling salesmen, nonhazardous clerical occupations, nonhazardous public employments, and casual employees employed otherwise than for the purpose of the employer's business. Alberta also excludes railroads. Moreover the workmen's compensation boards have been given discretionary power both to increase and to decrease the scope of the acts by adding to or subtracting from the industries enumerated in the statute. Under this authority the original statutory scope of the acts has been considerably changed. Many new classes of industries have been added; others have been excluded. In addition, the Ontario board has exempted certain classes of employers having less than a stipulated number of employees. The policy of the boards in including and excluding certain industries is apparently determined by the hazard of the particular industry and by the administrative difficulty of collecting premiums in the case of small employers. Exempted employments usually are given the privilege of coming under the act if either the employer or employee so desires.

Under all of the Canadian laws employees injured without the Province are entitled to compensation benefits if the place of business of the employer and the usual place of employment of the workmen are in the Province. The following provision found in the Alberta law is typical of that in the laws of practically all the Provinces:

(1) Where an accident happens while the workman is employed elsewhere than in the Province which would entitle him or his dependents to compensation under this act if it had happened in the Province, the workman or his dependents shall be entitled to compensation under this act—

(a) If the place or chief place of business of the employer is situate in the Province and the residence and the usual place of employment of the workman are in the Province and his employment out of the Province has immediately followed his employment by the same employer within the Province and has lasted less than six months; or

(b) If an accident happens to a workman who is a resident of the Province and the nature of the employment is such that in the course of the work or service which the workman performs it is required to be performed both within and without the Province.

(2) Except as provided by subsection 1, no compensation shall be payable under this act where the accident to the workman happens elsewhere than in the Province.

The following table shows more in detail the scope of the several Canadian compensation acts:

SCOPE OF CANADIAN COMPENSATION LAWS.

Inclusions: Enumerated hazardous employ- ments.	Exclusions. ¹				
	Outworkers.	Traveling salesmen.	Nonhazard- ous clerical occupations.	Casual-em- ployees not in usual course of employer's business.	Public and other employments.
Alberta.....	Alberta.....	Alberta.....	Alberta.....	Alberta.....	Alberta (nonhazardous municipal; railroads; itinerant employees).
British Columbia.....	British Columbia.....	British Columbia.....	British Columbia.....	British Columbia.....	British Columbia (nonhazardous public).
Manitoba.....	Manitoba.....	Manitoba.....	Manitoba.....	Manitoba.....	Manitoba (nonhazardous public).
New Brunswick.....	New Brunswick.....	New Brunswick.....	New Brunswick.....	New Brunswick.....	New Brunswick (provincial).
Nova Scotia.....	Nova Scotia.....	Nova Scotia.....	Nova Scotia.....	Nova Scotia.....	Nova Scotia (nonhazardous public).
Ontario.....	Ontario.....			Ontario.....	Ontario (provincial and nonhazardous municipal).
Quebec.....					Quebec (public employees; sailing vessels; employees receiving over \$1,200 a year and those working alone).
	Yukon.....			Yukon.....	Yukon (employers having less than 5 employees).

¹ Agriculture and domestic service are universally excluded.

Accidents and Occupational Diseases.

CANADIAN compensation laws cover both accidents and occupational diseases. The provisions of the British act, both as to content and phraseology, have been adopted practically without change in nearly all of the Provinces. Every law except Quebec uses the phrase "personal injury by accident arising out of and in the course of the employment, unless it is attributable solely to the serious and willful misconduct of the workman." In four Provinces,¹ however, injuries due to willful and serious misconduct are compensable if they result in death or serious disability. In addition, New Brunswick excludes injuries if intentionally self-inflicted, due to intoxication, or caused by a fortuitous event not connected with the industry. Quebec also excludes intentionally self-inflicted injuries, while Yukon excludes those caused by intoxication.

As regards occupational diseases the Canadian Provinces followed the compensation law of Great Britain which originally included the following diseases and processes:

¹ Alberta, British Columbia, Manitoba, and Nova Scotia.

OCCUPATIONAL DISEASE SCHEDULE OF BRITISH WORKMEN'S COMPENSATION
LAW OF 1906.

Disease.	Process.
Anthrax.....	Handling of wool, hair, bristles, hides, and skins.
Lead poisoning or its sequelae.....	Any process involving the use of lead or its preparations or compounds.
Mercury poisoning or its sequelae.....	Any process involving the use of mercury or its preparations or compounds.
Phosphorus poisoning or its sequelae.....	Any process involving the use of phosphorus or its preparations or compounds.
Arsenic poisoning or its sequelae.....	Any process involving the use of arsenic or its preparations or compounds.
Ankylostomiasis.....	Mining.

Manitoba and British Columbia adopted verbatim the British act of 1906; Alberta and Ontario added miners' phthisis to the original list; while Nova Scotia added the three following diseases: Subcutaneous cellulitis of the hand (miners' beat hand), subcutaneous cellulitis over the patella (miners' beat knee), and acute bursitis over the elbow (miners' beat elbow). New Brunswick did not adopt the British schedule, but grants compensation benefits for all occupational diseases, as determined by the board, contracted in industries within the scope of the act. Quebec and Yukon do not compensate for occupational diseases.

However, the foregoing diseases are compensable only if they are due to the nature of any employment in which the workman was employed at any time within one year previous to the date of disability. Compensation shall be payable in the first instance by the last employer. The latter, however, may recover from other employers whose employment had within the year contributed to the contraction of the disease.

Waiting Period.

WITH the exception of Yukon Territory none of the Canadian compensation laws have a waiting period of over one week. In two Provinces the waiting time is only three days. Furthermore, in most of the Provinces compensation when payable begins from the date of the injury. The following table shows the waiting period for each Province:

WAITING PERIOD OF CANADIAN COMPENSATION LAWS.

Province.	Waiting period.
Alberta.....	3 days. None if disability lasts 10 days or more.
British Columbia.....	3 days.
Manitoba.....	6 days. None if disability is permanent or lasts over 6 days.
New Brunswick.....	1 week.
Nova Scotia.....	6 days. None if disability lasts over 6 days.
Ontario.....	6 days. None if disability lasts over 6 days.
Quebec.....	1 week. None if totally and permanently disabled.
Yukon.....	13 days. None if disability lasts over 13 days.

Compensation Benefits.

THE compensation benefits of the Canadian laws are about on a par with the more liberal American acts. The scale of benefits is considerably lower, but on the other hand, the periods for which benefits are paid are much longer, compensation usually being paid during disability or until death or remarriage of the widow. In case of death the usual provision is a fixed monthly pension of \$20 to the widow, with an additional \$5 a month for each child, but not over \$40 in all. In case of disability the usual compensation is 55 per cent of the employee's earnings, to be paid during disability. The following table shows the per cent of wages paid as compensation, maximum weekly or monthly payments, and maximum period and amount of compensation payable in case of death, permanent total disability, and partial disability.

PER CENT OF WAGES PAID AS COMPENSATION, MAXIMUM WEEKLY OR MONTHLY PAYMENTS, AND MAXIMUM PERIOD AND AMOUNT OF COMPENSATION PAYABLE IN CASE OF DEATH, PERMANENT TOTAL DISABILITY, AND PARTIAL DISABILITY.

Province.	Per cent of wages.	Monthly or weekly maximum.	Maximum period and amount of compensation.		
			Death.	Permanent total disability.	Partial disability.
Alberta	Not based on wages	\$40 monthly pension (death); \$16 weekly pension (total disability).	Probable industrial life of deceased (\$2,500).	L i f e (\$2,500)	\$1,000.
British Columbia..	55 (disability).	\$40 monthly pension (death); \$22 weekly (total disability).	Probable industrial life of deceased.	Life.....	During disability.
Manitoba	55 (disability).	\$40 monthly pension (death); \$22 weekly (total disability).	Probable industrial life of deceased.	Life.....	During disability.
New Brunswick...	55 (disability).	\$40 monthly pension (death); \$15.86 weekly disability).	Probable industrial life of deceased (\$3,500).	L i f e (\$3,500).	During disability (\$1,500).
Nova Scotia.....	55 (disability).	\$40 monthly pension (death); \$13.20 weekly (total disability).	Probable industrial life of deceased.	Life.....	During disability.
Ontario	55 (disability).	\$60 monthly pension (death); \$22 weekly (total disability).	Probable industrial life of deceased.	Life.....	During disability.
Quebec	50 (disability).		4 years' earnings (\$2,500).	L i f e (\$2,500).	During disability.
Yukon	50 (temporary total).		\$2,500.....	\$3,000.....	\$3,000.

Weekly or Monthly Maximum.

The provisions relative to weekly or monthly maximums differ widely as between death and disability. In case of death the monthly maximum is usually \$40 (Ontario, \$60) but not over 55 per cent of the employee's wages. In case of total disability the weekly maximum amounts range from \$13.20 in Nova Scotia to \$22 in British Columbia, Manitoba, and Ontario. The Quebec and Yukon laws make no provision in this regard.

Death.

Compensation benefits in case of death are not based upon wages. Instead, all of the Provinces except Quebec and Yukon provide a fixed monthly pension of \$20 for the widow (\$30 in Ontario) with an additional \$5 for each child (\$7.50 in Ontario). Payments to the widow continue for a period equal to the probable industrial life of the deceased husband, or to quote the law, "the payments shall continue only so long as in the opinion of the board it might reasonably have been expected had the workman lived he would have contributed to the support of the dependents." Payments to the children cease at 16 years and to the widow upon remarriage, except that in the latter event she is paid a lump sum equal to two years' compensation. Two of the above Provinces have a maximum limit; in Alberta this limit is \$2,500 and in New Brunswick \$3,500. Under the Quebec law the death benefits are four years' earnings of the deceased employee (maximum, \$2,500), while the Yukon law provides a flat sum of \$2,500. In addition to the compensation benefits most of the Provinces provide also for burial expenses, the maximum allowance usually being \$75.

Total Disability.

In all of the Provinces (except Yukon) compensation for total disability accidents continue during disability and in case of permanent disability during the life of the injured workman. Three Provinces, however, provide a maximum limit--Alberta and Quebec \$2,500 and New Brunswick \$3,500. In five Provinces (British Columbia, Manitoba, New Brunswick, Nova Scotia, and Ontario) the amount of compensation is 55 per cent of the employee's wages, subject to weekly maximum and minimum limits. In Quebec the percentage is 50, while in Alberta the amount is not based upon wages, a weekly pension (maximum \$16, minimum \$10) being provided instead.

Partial Disability.

The Canadian method of compensating partial disability accidents differs widely from the popular American method. Most of the laws in the United States contain a schedule of specified partial disabilities for which benefits are awarded for stated periods, the weekly payments being based upon a percentage of wages earned at the time of the injury. In Canada all of the Provinces except Alberta and Yukon base the amount of compensation upon the wage loss or impairment of earning capacity, payments continuing during disability. The workmen's compensation boards have authority to formulate partial disability schedules in which the loss of earning capacity of the various disabilities is expressed in percentages of total disability. The age and occupation of the injured workman is usually taken into con-

sideration in determining his impairment of earning capacity. One of these Provinces, however, has a maximum limit—New Brunswick \$1,500. Alberta and Yukon have adopted the Washington method and provide fixed amounts for certain specified injuries.

Medical Service.

ALTHOUGH none of the early Canadian acts provided medical or surgical service in the present acceptation of the term, some of the Provinces have recently made provision therefor. The following table shows for each Province the amount of medical and surgical aid and the conditions under which it is furnished:

MEDICAL SERVICE PROVIDED UNDER CANADIAN COMPENSATION LAWS.

Province.	Maximum amount, and other qualifications.
Alberta.....	Reasonable expenses of last sickness in fatal cases involving no dependents; in other cases employees furnished medical aid from employer's hospital fund or State accident fund to which employees must contribute.
British Columbia....	Such service as reasonably necessary; transportation included; special provision for seamen; employer's hospital-fund permitted.
Manitoba.....	Such medical attendance as board deems reasonable; maximum \$100; additional special treatment in permanent disability cases if compensation costs can be reduced.
New Brunswick.....	Such special medical and surgical treatment as will conserve the accident fund and such first-aid and hospital treatment as the board may require.
Nova Scotia.....	Reasonable service for 30 days in compensable injury cases; additional treatment if necessary to reduce disability; special provision for seamen; approved establishment benefit schemes permitted.
Ontario.....	Necessary service in compensable injury cases; transportation included; approved establishment benefit schemes permitted.
Quebec.....	No provision.
Yukon.....	No provision.

Nonresident Alien Dependents.

WITH the exception of Quebec all of the Provinces grant compensation to nonresident alien dependents but with certain qualifications and restrictions. In Alberta, the law provides that it shall be conclusively presumed that a workman, two years after his arrival in Canada, has no nonresident dependents other than his parents—one year after his arrival in case the workman is not of British nationality. In British Columbia nonresident alien dependents are entitled to compensation, but the board may award such lesser sum as will, according to the conditions and cost of living in the place of residence of such dependents, maintain them in a like degree of comfort as dependents of the same class, residing in Canada and receiving the full amount of compensation, would enjoy. In the other five Provinces (Manitoba, New Brunswick, Nova Scotia, Ontario, and Yukon) a nonresident alien dependent shall not be entitled to compensation unless by the law of the country in which he resides the dependents of a workman to whom an accident happens in such country if resident in Canada would be entitled to compensation.

Moreover, the amount of compensation shall not be greater than that granted under the foreign law. Furthermore, in Manitoba and Ontario, nonresident enemy aliens are excluded entirely from the benefits of the act. Ontario also denies compensation to a resident of a country "voluntarily withdrawn from alliance with the British Empire during the Great War, or of a country in default of establishing peaceful and harmonious relations with the British Empire." The Quebec law does not grant compensation to nonresident alien dependents.

Administration.

IN ALL of the Provinces except Quebec and Yukon, which have the court type of law, the administration of the compensation acts is under workmen's compensation boards. The members of the boards are appointed by the lieutenant governor and hold office during good behavior, except that in British Columbia the term of office is 10 years. In four¹ of the Provinces, however, the commissioners are subject to compulsory retirement at the age of 75. Each board is authorized to appoint its officers and employees and to fix their salaries. The term of office of such employees is subject to the pleasure of the board.

The boards have final and exclusive jurisdiction over all compensation matters, no appeal to the courts being permitted except in New Brunswick and Nova Scotia. In these two Provinces appeal may be had to the supreme court upon questions of law, but only with the permission of the judge of said court.

Accident Prevention.

OF THE six Canadian Provinces having administrative compensation boards, the British Columbia board is the only one which has statutory jurisdiction over accident prevention work. In all of the other Provinces this function is performed by other State or private agencies. The Alberta and Manitoba compensation laws made no provision for accident prevention at all, while the laws of New Brunswick, Nova Scotia, and Ontario authorize employers' associations to undertake this work, with a rather loose supervision by the workmen's compensation board.

¹ Manitoba, New Brunswick, Nova Scotia, and Ontario.

SOCIAL INSURANCE.

Increase in Statutory Benefits Under British Laws.

INCREASES in cost of living are notably burdensome in the case of persons whose income is fixed by law, as in the case of public employees, and more especially of persons whose income is derived from pensions or other fixed awards.

Amendment of Workmen's Compensation Law.

TO MEET the needs of persons in one of these latter classes, i. e., injured workmen, the British compensation law was amended in 1917 by adding 25 per cent to current and accruing awards payable during total incapacity on the basis of the original act. This addition was to be effective during the period of the war and for six months thereafter. On December 30, 1919, royal assent was given to a "war addition" amendment, 1919, changing the 25 per cent increase to one of 75 per cent, effective January 1, 1920. This is an amendment to the Workmen Compensation (War Addition) Act, 1917, but contains no limitation as to term.

Old-Age Pensions Act, 1919.¹

ANOTHER liberalizing enactment is one affecting the Old-Age Pension Acts, 1908, 1911. Perhaps the first change to attract attention is the increase of the maximum pension allowance from 5s.² per week to 10s. Pensions vary in accordance with the amount of income derived from other sources, being so graduated that the maximum receipts from property owned or other resources, combined with the pension allowance, shall give a weekly support amounting to 20s. This is the result of the 1919 amendment, and contrasts with the maximum of 13s. provided for by the law of 1908.

The original act allowed no benefits where the claimant had yearly means in excess of £31, 10s. but the amendment advanced this sum to £49, 17s. 6d. This enlargement of course brings an additional number of persons within the purview of the act, estimated to be 220,000.

A third change of importance is one striking out the provision that the receipt of poor relief would bar the recipient from pensions.

¹ Source: Local Government Journal, London, Dec. 27, 1919.

² Owing to fluctuations in exchange value conversions into United States money are not made. The normal par value of the pound is \$4.87, of the shilling 24.3 cents, and of the penny 2 cents.

It was held that this was an artificial disqualification, laying an unwarranted social slight on the recipient of poor relief. It also led to inadequate standards of living; while now if the pensioner is found in need of outdoor relief, it is recognized as merely another form of assistance of the same general nature.

Other changes relate to term of residence, prison sentences, the status of wives of aliens, etc., the changes generally being in the direction of liberality.

Civil-Service Pensions.¹

A THIRD item of like nature to the foregoing relates to the amounts of retirement pensions for civil servants. Due to a war bonus award, the Treasury agrees to add 40 per cent to the retiring salary, where it does not exceed £300, and 30 per cent to higher salaries, instead of 25 per cent and 20 per cent, as formerly. Thus a man drawing £100 annual salary would be rated £140 for retirement purposes, making his "half-pay" on retirement £70 instead of £63 as before.

Restriction of Unemployment Benefits in Austria.²

IN VIEW of the serious financial situation in Austria, the Government has decided to proceed energetically with the abolition of unemployment benefits. The industrial district commission in Vienna has announced that it will cease to pay unemployment benefits to the following classes of workers:

1. Furniture makers, wheelwrights, shoemakers, brickmakers, clay workers, and women tailors.

2. Single and married unemployed manual workers and salaried employees with no children who before August 1, 1914, were not employed at work which involved compulsory sickness insurance or have not received suitable training in any trade in so far as in the opinion of the unemployment bureau they are unfitted for housework or agriculture.

3. Married women workers and employees (with the exception of those who before their husbands were called into military service were employed at work which made sickness insurance obligatory) whose husbands have returned from the war and are earning wages.

This limitation of unemployment relief is regarded by *Soziale Praxis* as a sound idea, which should be imitated in Germany, where the workers have turned the right to work into a right not to work.

¹ Source: Local Government Journal, London, Dec. 27, 1912.

² *Soziale Praxis und Archiv für Volkswohlfahrt*. Berlin, Nov. 27, 1912.

LABOR LAWS.

Suspended Sentences in Labor Law Cases in New York State.

A PAMPHLET of 20 pages prepared by Bernard L. Shientag, chief counsel to the New York State Industrial Commission, considers the matter of suspended sentences in labor law cases. The purpose of the pamphlet is to give publicity to a practice that is largely prevalent in the State of New York with regard to violations of the labor laws. The State is divided into two inspection districts, one including New York City, and the other, known as the second inspection district, the rest of the State. The study covers a period of two and one-half years, from July 1, 1917, to December 31, 1919. The policy of the commission as set forth is to secure compliance with the provisions of the labor law with as little friction and hardship for the employers as possible. In most cases notice is first sent, and time allowed for remedying the practice concerning which complaint is made. If this is not done, a warning letter is sent by the counsel, and if that does not produce results, prosecution is begun. Even then if the owner or employer complies with the law, the department asks that proceedings be dismissed, and "it is only in exceptional cases where the employer uses improper or obstructive tactics that this procedure is not followed." Naturally, after this forbearance, and exclusion of cases in which there is compliance, even though tardy, the commission feels that there should be an actual enforcement of penalties.

There are two principal classes of cases noted, one class consisting of those under the factory law, and the other of those under the mercantile law. Factory law cases relate to fire protection and to child labor. Under the mercantile law the chief difficulty is with the illegal employment of children, hours of labor of women, and the allowance of a day of rest. During the year ended June 30, 1918, there were 967 convictions under the factory law, resulting in 529 fines, aggregating \$11,930; while in 438 cases, or about 45 per cent, sentence was suspended. In the second inspection district, fines were assessed in but 59 cases out of 221 convictions, sentences being suspended in 73 per cent of the cases. There was a higher degree of strictness with regard to offenses against the fire protection law in New York City, the percentage of suspended sentences being 9; the up-State courts, however, were more lenient, suspending sentences in 70 per cent of the cases,

though here the class of cases considered was more inclusive. Of the convictions in mercantile cases 70 per cent were granted suspended sentences in New York City and 80 per cent up-State.

Effort is being constantly made to secure better cooperation between the courts and the commission, and that some success in this connection is being achieved is shown by the following brief table:

PER CENT OF SUSPENDED SENTENCES DURING EACH SPECIFIED PERIOD, IN NEW YORK CITY AND UP-STATE.

Period.	New York City.	Up-State.
	<i>Per cent.</i>	<i>Per cent.</i>
July, 1917, to June, 1918.....	58	75
July, 1918, to June, 1919.....	50	70
July, 1919, to December, 1919.....	47	69

The point is made that while the courts as a rule reach a conclusion as to the guilt of the defendant which is satisfactory to the commission, there is a serious weakening of the laws by a too general failure to enforce the penalties. While most employers comply with the statutes, there are those who disregard them, and for whom a penalty is the only persuasive argument. This is particularly the case where children are illegally employed or women are worked prohibited hours. An exit once constructed or a building otherwise altered remains the same, while a child may be reemployed after dismissal or a door be locked again when the fear of inspection is absent. Since inspection can not be constant, the imposition of a penalty is an indispensable aid to the enforcement of the law, and for this the aid of the judges is essential.

All we can do is to call public attention to these matters, and to plead for a closer and more sympathetic cooperation between the commission and the courts, in order that the purpose and intent of these beneficent laws, so important to the safety and welfare of the people, may be fully carried out.

Comparison of Foreign Eight-Hour Laws.¹

By LEIFUR MAGNUSSON.

TWENTY countries had embodied in their legislation, and one in its constitution, the principle of the 8-hour day or 48-hour week before the International Labor Conference, under the League of Nations, drafted its convention recommending the 8-hour day and the 48-hour week for incorporation into national legislation. Thus, as pointed out in effect by various speakers among Government and labor delegates, the conference

¹ See also, Report on the 8-hour day or 48-hour week, prepared by the Organizing Committee for the International Labor Conference, Washington, 1919 [London, 1919], page 156.

was merely engaged in registering accepted principles, or at the very most, in harmonizing divergences of practice in respect to the application of the 8-hour day. It was insisted upon by the workers and the Government delegates that the committee appointed to study the matter and to draft a convention should consider only the practical aspects of the matter, that the principle had already been agreed upon. To appoint a committee to discuss the principle of the 8-hour day and the 48-hour week, would be, as one Government delegate wittily put it, like appointing a committee for the discovery of America.

Aside, however, from the fact that the principle of the shorter workday has already been agreed upon in the legislation of the major civilized countries, there remains much to be accomplished in harmonizing that legislation, stopping up loopholes in it, and making it effective in practice. Probably the most valuable result of the international convention will be the effect it has as a standard for legislation of the kind in question. The convention raises the standards set up in some of the national legislation by broadening the scope of the legislation, specifying exceptions more explicitly, and defining the rate of overtime and the circumstances justifying overtime.

In this article a comparison is made of the provisions of the various 8-hour laws and the international 8-hour convention. The State laws of the United States and those of the States comprising the Federal unions of some of the South American countries have been omitted. No attempt has been made to cover those 8-hour laws of certain countries which are applicable to public employments, nor those already applying to mines. While some of these newer laws include mining, yet before the war and before the springing up of these general 8-hour laws, mining was already practically an 8-hour industry the world over, and is now moving in the direction of a seven or six hour day.

The following statement shows the countries included and the date of enactment of the 8-hour laws:

GENERAL EIGHT-HOUR LAWS IN FOREIGN COUNTRIES.

Country.	Date.	Country.	Date.
Austria.....	Dec. 19, 1918.	Panama.....	Not ascertained.
Czecho-Slovakia.....	Dec. 9, 1918.	Peru.....	Jan. 15, 1919.
Denmark.....	Feb. 12, 1919.	Poland.....	Nov. 23, 1918.
Ecuador.....	Sept. 11, 1916.	Portugal.....	May 7, 1919.
Finland.....	Nov. 27, 1917 (amended Aug. 14, 19, 1918).	Russia.....	Oct. 26 (Nov. 11), 1917.
France.....	Apr. 23, 1919.	Serbs, Croats, and Slo- venes (Jugo-Slavia).	Sept. 12, 1919.
Germany.....	Nov. 23, 1918.	Spain.....	Apr. 3, 1919.
Luxemburg.....	Dec. 14, 1918.	Sweden.....	Oct. 17, 1919.
Mexico.....	Jan. 31, 1917. ¹	Switzerland.....	June 27, 1919.
Netherlands.....	Nov. 1, 1919. ²	Uruguay.....	Nov. 17, 1915.
Norway.....	Aug. 14, 1918.		

¹ Constitution.² Date in effect.

Types of Laws.

THERE are two general types of 8-hour laws:¹ (1) Those in which the coverage is specific; and (2) those in which it is general. In the first instance, the laws specify the industries in which the principle shall be applied or abated; and in the second instance, the principle is stated as a general rule, to be applied in industries as may be determined by administrative order, or by the action of arbitration courts. This classification is very general, and in both types of laws administrative orders defining and permitting exceptions of the principle play some part. The draft convention of the International Labor Conference is an example of the use both of specifications in the general law and of administrative authority.

The Australian and New Zealand systems are the only examples of standardization and enforcement through arbitration courts. The 8-hour day in these countries has been quite universal for several years, and is mainly the result of collective agreements between employers and workers and of awards of the arbitration courts and trade boards. Aside from these observations concerning them, the Australian and New Zealand laws are not covered in this article.

The laws of the other countries are grouped as follows according to the general type of legislation in practice: Laws in which industries covered are specified are those of Austria, Czecho-Slovakia, Denmark, Ecuador, Finland, Luxemburg, Netherlands, Poland, Portugal, Russia, the Kingdom of the Serbs, Croats, and Slovenes; Sweden, Switzerland, and Uruguay. Laws in which industries covered are determined in detail by administrative orders are those of France, Norway, and Spain.

Hours of Work Defined.

ALL the laws define the hours of work as the actual hours of work excluding rest periods.

The Peace Treaty, in Part XIII, defining labor standards, declared for the 8-hour day *or* 48-hour week as alternatives. The international convention drafted by the International Labor Conference used the term "8-hour day *and* 48-hour week," thus defining the working period in terms of both daily and weekly hours. The twofold method of definition, as against the alternative one, is obviously better calculated to prevent abuses in the application of the principle such as might take place if employees could be required to compress the whole 48 hours of the week into a period of days less than the number in the week. On the other hand the employers pointed to the greater

¹ See also report on the 8-hour day or 48-hour week, prepared by the organizing committee for the International Labor Conference, Washington, 1919 [London 1919], p. 5. Three types of laws are distinguished by this report, namely, the two mentioned above and the Australian arbitration-court laws.

flexibility in adjusting hours obtained by taking the week as the unit. The convention accepted what was in effect a compromise of the hard-and-fast rule, namely, a fairly liberal policy in respect to exceptions, and permitted the hours not worked on any weekday—hours less than the 8 prescribed—to be distributed over the remaining days of the week. The laws of the following countries accept either the day, or the day *and* the week, as the unit: Austria, Denmark, Ecuador, France, Germany, Luxemburg, Netherlands, Poland, Russia, and Uruguay. The following have adopted the 8-hour day *or* 48-hour week with the alternative form of definition: Finland, Norway (allows $8\frac{1}{2}$ hours per day on 5 days of the week), Portugal, the Kingdom of the Serbs, Croats, and Slovenes, and Sweden (allows $8\frac{1}{2}$ hours per day on 5 days of the week). Switzerland makes the week the unit in determining the hours. No limit is apparently placed on the day, except that in shift work the day may not exceed 9 hours.

Employees Included.

MOST of the laws include all persons employed in the industries covered by the acts, other than the members of a family. The international convention is specific and includes all departments of an industry so as not to discriminate between those who perform clerical work and the industrial workers in the same establishment. The laws, as near as may be determined without first-hand knowledge of administrative orders interpreting them, which cover only industrial workers are those of Austria, Czecho-Slovakia, Denmark, Germany, Russia, and Sweden. The last named is the only country which anticipates the international convention by specifically excluding persons in a managerial capacity and in positions of confidence. Laws covering only industrial workers naturally exclude this class. The laws of Czecho-Slovakia, Denmark, Netherlands, and Norway, which are likewise factory inspection laws of a general nature, make distinctions as to the hours of women, children, and adult male workers. The details can not be gone into in this analysis, which aims to cover only the general hours of work of adult males.

Industries Excluded.

IT is not possible to determine exactly the coverage of the laws. Either by express mention or by implication, certain industries and employments are excluded. The acts usually cover those undertakings which are included in the factory legislation of the country, and only a detailed first-hand study could determine the exact scope of the terms "factory" or "industrial undertaking." Consequently, a negative form of definition is probably more helpful than a positive one in order to determine the scope of the laws. All the laws, with

the exception of those of Ecuador, France, Poland, Portugal, the Kingdom of the Serbs, Croats, and Slovenes; Sweden, and Uruguay, exclude commercial and office employments. In some respects these laws set a higher standard than the international convention. Homework is universally excluded, as are all undertakings where only members of the family are employed. Agriculture is also generally excluded, except in the Czecho-Slovakian law, and in the Dutch law during periods other than the harvest season. The Danish law applies only to work in continuous industries and of all the laws is therefore the most limited in scope. Seasonal industries are either excluded entirely or are given special treatment in the exceptions allowed. Except in Sweden, where special laws exist for that class of work, public employments are included along with private undertakings.

Exceptions Permitted.

EVEN within the scope of the various laws certain exceptions are permitted to be supplied by administrative order. In determining these exceptions, it is customary to consult the organizations of workers and employers. The customary exceptions are either temporary or permanent exclusions of an industry or certain departments thereof. All the laws make temporary exceptions in the case of seasonal industries; also in case of exceptional pressure of work, as well as in the case of emergencies created by unforeseen accidents or force majeure. The law of Czecho-Slovakia, while including agriculture, makes exception in the distribution of the hours of work, spreading them over a period of four weeks so as to attain an average of 48 per week. France has a provision which is found in no other law, namely, that exception may be made in the case of an industry if an international agreement is entered into providing for different hours in the industry in question. Switzerland has the only act which contains a provision that an exception from the application of the 8-hour rule may be granted to an industry to enable it to meet the competition of countries working longer hours.

Overtime.

THE international convention is the most explicit as respects the provisions affecting overtime. Here the rate of overtime is definitely fixed at time and a quarter; the amount of overtime is subject to determination by agreement between the employers' and workers' organizations. The international convention further requires special authorization for working overtime and provides for the registration of the amount of overtime worked. Few of the national laws are as specific on this point. Those which provide for an extra rate of compensation for overtime are the laws of Austria, Ecuador, Finland, France, Poland, Portugal, and the Serbs, Croats,

and Slovenes. The amount of overtime is limited by the laws of the following countries: Austria, Finland, Netherlands, Russia, Sweden, and Switzerland. The laws in which registration of the amount of overtime is required are those of Finland, Poland, Russia, and the Serbs, Croats, and Slovenes. Those countries which have laws laying down the principle of an 8-hour day and leaving its application to administrative order make no detailed provision respecting overtime.

Administration.

THE general administration of the 8-hour laws is confided to the factory inspection departments and related services. The ordinary police authority and inferior courts try all cases of contravention under the law. Only one country, Peru, provides for the settlement of disputes as to wages arising from the application of the law, by an arbitration board composed of three members, two representing the parties and the third an arbitrator chairman chosen by the supreme court. No provision, however, is made as to enforcement of the award, although the arbitrators are required to report within eight days after assuming jurisdiction of the dispute. However, in this connection it should be noted that the majority of the other countries have arbitration and conciliation boards for the settlement of ordinary labor disputes so that the provision of the Peruvian law is not necessarily an advance on the 8-hour legislation of the other countries as far as the settlement of disputes is concerned.

Conclusion.

THIS brief study of the 8-hour laws of various countries has served to show the great diversity in the provisions which the laws lay down respecting the application of the 8-hour principle. Some are obviously extremely vague and limited in scope, others are pious wishes at the most. None are as definite or as comprehensive as the international convention adopted at the International Labor Conference in Washington (October 29–Nov. 29, 1919), the acceptance of which would in most countries constitute a distinct advance over the existing 8-hour laws.

Topical summaries of the 8-hour laws now in force in various foreign countries and of the international convention on the 8-hour day follow:

Topical Summaries of Eight-Hour Laws.

International Convention.¹

Date of adoption.—Conference of October 29, 1919; effective as to members ratifying it, July 1, 1921.

Hours of work defined.—Working hours shall not exceed 8 per day and 48 per week.

Persons included.—All persons other than members of family and those engaged in homework employed in undertakings specified.

¹ Reproduced in full in February issue of the MONTHLY LABOR REVIEW, pp. 15 to 20.

Industries covered.—Industries whether public or private include particularly mines, quarries, and other works for the extraction of minerals from the earth; establishments engaged in the manufacture, alteration, cleaning, repairing, ornamenting, finishing, adapting for sale, breaking up or demolishing, or transformation of materials; shipbuilding; generation and transmission of electric or motive power; construction and maintenance work in general; transportation, handling, and warehousing.

Reduction in wages.—No provision.

Exceptions.—Persons in a supervisory or managerial position, or confidential capacity; shift work, provided the average weekly hours for a period of 3 weeks do not exceed 48; accident, actual or threatened, urgent work to machinery or plant, or in case of force majeure when necessary to maintain ordinary work; certain conditions, when authorized by the Government, in which cases the average per week shall not exceed 48; certain occupations preliminary to and subsequent to beginning and stopping of work; unexpected demands upon the capacity of an establishment; national emergency. Special exceptions made as to time when becoming effective in case of certain Governments.

Not exceeding 56 hours per week in processes carried on under continuous operation.

Overtime.—Rate of compensation for overtime fixed at time and a quarter. Amount of overtime to be determined by administrative regulation and after consultation with employers' and workers' organizations.

Special orders.—Permanent and temporary orders may be issued by the Government after consultation with the organizations of employers and workers concerned, if such exist.

Administration.—Left to national authority, which will determine the appropriate agencies of enforcement.

Austria.

Date of enactment.—December 19, 1918; effective January 3, 1919. Continues in force until conclusion of peace.

Hours of work defined.—Hours of work shall not exceed 8 in 24, excluding breaks in work. For young people and women, 44 per week, and no work on Saturdays after 12 noon.

Persons included.—Industrial workers.

Industries covered.—All undertakings conducted by a corporation, State, Province, or commune, if operated as factories subject to the Industrial Code.

Reduction in wages.—No provision.

Exceptions.—When necessary to make up for unforeseen interruption not periodically recurring; press of work, especially in seasonal industries; in cases of collective contracts calling for a maximum of 48 hours per week; subsidiary processes (heating boilers, cleaning, etc.), provided young people are not so employed.

Overtime.—Overtime work paid for at 150 per cent normal wages; limited to 2 hours per day and not exceeding 3 weeks.

Special orders.—May allow further exceptions, after consultation with an advisory board on which employers and workers are equally represented.

Administration.—Factory inspection service and police authorities connected therewith. Contraventions are subject to the penal provisions of the Industrial Code.

Czecho-Slovakia.¹

Date of enactment.—December 9, 1918.

Hours of work defined.—Actual hours of labor limited to 8 per day and 48 per week.

Persons included.—Workers.

¹ The Czecho-Slovakian law is also a general factory act and includes provisions affecting the employment of women and children, night work, rest periods, etc.

Industries covered.—Industrial undertakings, whether public or private, or conducted for profit, philanthropic or charitable purposes; mining, coke ovens, and blast furnaces, agriculture and lumbering, provided they are run as enterprises by hired labor; transportation.

These provisions may not be evaded by giving out homework.

Reduction in wages.—Prohibited if based on decrease in actual hours worked.

Exceptions.—In particular classes of undertakings, especially transport and agriculture, the hours may be spread differently over a period for 4 weeks, the total therein not to exceed 192 hours; one-half hour for ascent and descent allowed in mines; where work is by shifts; force majeure, accidents, extraordinary demand, when other means are not practical; emergency work or repair work when life, health, or public interests are in danger; fixing of boilers, cleaning of workrooms, feeding animals, etc.; public utility establishments not requiring over 6 hours of work per day.

Overtime.—All overtime work separately paid for, rate not stated. Excluding emergency work, the maximum amount of overtime is 2 hours per day within a period of 20 weeks or 240 hours per year.

Special orders.—Required for overtime work, except for emergency and preparatory work, work when life, health or public interest is at stake. In special cases, in railroad work extra hours may not be required unless the minister previously consults workers' representatives.

Administration.—Ministry of Social Welfare and its subordinate, factory and mine-inspection service, the railroad administration, and local and municipal police authorities.

Denmark.

Date of enactment.—February 12, 1919; in effect, August 12, 1919.

Hours of work defined.—No worker in continuous operation may have gross hours of labor in excess of 8 per day, or more than 160 hours in 3 weeks; 16 hours at change of shifts permissible.

Persons included.—Workers in establishments covered.

Industries covered.—Industries regularly operated continuously; seasonal industries with four months of continuous process work.

Reduction in wages.—No provision.

Exceptions.—On change of shift days hours may be extended to 16; seasonal industries for four months in any year; repair work, sickness, or for completion of a specific job.

Overtime.—No provision.

Special orders.—Required in case of seasonal industries covered and after consultation with employers' and workers' organizations.

Administration.—Minister of labor and subordinate factory inspection service; advisory labor council representing employers and workers equally and under chairmanship of State official.

Ecuador.

Date of enactment.—September 11, 1916.

Hours of work defined.—Not more than eight hours daily, six days a week.

Persons included.—Laborers, mechanics, employees.

Industries covered.—Commercial establishments, offices, industrial enterprises, and in general any business whatever the nature of the services rendered.

Reduction in wages.—No provision.

Exceptions.—Laborers, mechanics, clerks, etc., may work beyond the legal limit upon request.

Overtime.—Overtime, before 6 p. m. is paid 20 per cent extra; between 6 and 12 p. m., 50 per cent, and after the last-named hour 100 per cent.

Special orders.—No provision.

Administration.—Judges of police court and parish justices try suits under act.

Finland.

Date of enactment.—November 27, 1917, amended August 14, 1918; administrative orders, August 19, 1918.

Hours of work defined.—Actual work not to exceed 8 hours per day (bank to bank in mining), or 96 hours in 2 weeks.

Persons included.—All persons in industries and undertakings mentioned, other than owner and members of his family.

Industries covered.—Whether public or private or conducted for profit or philanthropic purposes, handicrafts, factory or other industrial occupations, building, repair, and upkeep of buildings, and construction of docks, railways, bridges, roads, etc., salvage, and diving; bathing establishments; clearing, cleaning, draining, and scavenging; rafting and lumbering; loading and unloading; commercial, office, or warehouse work; inns, hotels, cafés, and similar industries; railway and street traffic, except traffic and rail sections; postal, customs, telephonic service, canals, except traffic sections; automobile traffic and jobbing; industries and undertakings similar to the above.

Reduction in wages.—No provision.

Exceptions.—In case of accident, force majeure, or other occurrence threatening to interrupt work or cause damage, such extra work not included in the regularly allowed overtime; establishments where work requires to be carried on uninterruptedly day and night: (a) 156 hours in 3 weeks with suspension on Sunday; (b) 168 hours in 3 weeks without such suspension (Senate decree, Aug. 19, 1918); subsidiary work in cleaning, repairing, heating, etc.

Overtime.—Overtime rate of time and a half for the first 2 hours, and double time for subsequent hours; amount of overtime not to exceed 24 hours in 2 weeks, and over 350 hours per year. Consent of inspection authorities required for overtime beyond 200 hours a year; registration and account of all overtime required.

Special orders.—Defining in detail exemptions from the law if, owing to the technical nature of the work, the time of year, or the compelling circumstances, the act can not be applied in practice.

Administration.—Department of Social Welfare and the subordinate factory inspection service, together with local police authorities.

France.

Date of enactment.—April 23, 1919 (forms Title I of Book II of the Labor Code).

Hours of work defined.—Actual hours of work limited to 8 per day or 48 per week.

Persons included defined.—Any age or sex, whether wage earners or salaried persons.

Industries covered.—Industrial and commercial establishments, including all departments thereof; both private and public undertakings whether of a religious, educational, charitable or philanthropic nature.

Reduction in wages.—No reduction in wages allowed as result of shortening hours through law.

Exceptions.—Left to administrative order for determination in general. Subject to revision if contrary to international agreements entered into.

Overtime.—Left to administrative order for determination.

Special orders.—Terms of law applied through administrative orders which apply either to a trade or locality or both. These will determine distribution of hours within week or other period, temporary and permanent exceptions, rest periods. Consultation with employers and workers required in advance of promulgation of orders or decrees.

Administration.—Ministry of Labor and subordinate factory inspection service.

Germany.¹

Date of enactment.—November 23, 1918; effective upon publication.

Hours of work defined.—Regular daily hours of labor, exclusive of rest periods, must not exceed eight. Curtailment on days preceding Sundays and holidays may be made up on other working days.

Persons included.—Industrial workers.

Industries covered.—All industrial establishments, inclusive of mining; Federal, State, and communal establishments, and agricultural subsidiary establishments of an industrial nature.

Reduction in wages.—No provision.

Exceptions.—General exceptions in transportation and communication (railway, post and telegraph service) subject to agreements between managers and workmen's organization; shift changes (permitting a 16-hour day once in 3 weeks); temporary emergency work not permitting delay; if public interest or nature of work requires uninterrupted work, provided labor can not be secured.

Special orders.—Factory inspection may authorize exceptions. Any hours of labor differing from the above must be in consequence of agreements, subject to approval of administrative officials.

Administration.—Department of Labor, factory and mine inspection services, and local police authorities.

Luxemburg.

Date of enactment.—December 14, 1918, administrative decree, December 14, 1918; effective December 15, 1918. Temporary, duration not specified.

Hours of work defined.—Actual duration of hours of work shall not provisionally exceed eight per day.

Persons included.—All employees in the classes of establishments enumerated below.

Industries covered.—Mines, clay-pits, quarries; iron and steel works and factories, establishments classed as dangerous, unhealthful, or noxious; factories employing steam or other mechanical motive power; public and private establishments, including those established for the purpose of industrial education or philanthropic purposes.

Reduction in wages.—Reduction of wages because of a reduction in hours is prohibited.

Exceptions.—Railroad transportation; work under direction of family authority, when not classed as dangerous or unhealthful or as not requiring heavy manual labor, and if steam or other mechanical power is not employed; handicraft and small industries employing less than 20 persons.

Special orders.—Exemptions, whether in general or for a limited time, may be authorized on special grounds.

Administration.—Ministry of Agriculture, Industry, and Commerce and subordinate factory inspection service.

Netherlands.²

Date of enactment.—Not ascertained; effective November 1, 1919.

Hours of work defined.—Actual hours of work per day not to exceed 8 hours per day and 45 per week.

Persons included.—All persons employed in factories, workshops, and offices.

¹ Full translation of the text of the order was published in the MONTHLY LABOR REVIEW, May, 1919, pp. 214, 215.

² Summary made from report on 8-hour day and 48-hour week, prepared by the organizing committee of the International Labor Conference, Washington, 1919. [London, 1919.] This law is more than an hours-of-labor regulation and applies also to the employment of women and children, age of admission to industry, etc.

Industries covered.—All industries except domestic service, agriculture during other than harvest seasons, and those for which other laws are applicable—stonecutters, harbor workers, mine workers, tramway and railroad transportation employees.

Reduction in wages.—No provision.

Exceptions.—Work of preparation and of cleaning up in factories, etc., allowed up to 10 hours per day; caretakers permitted to work up to 13 hours per day and 78 hours per week; seasonal industries; general exception for certain factories and workshops specified by order.

Overtime.—Amount of overtime generally limited to 2 hours per day and 7 hours per week; special order may permit 1 hour daily for 5 days per week as a regular rule in designated factories; seasonal industries, maximum hours limited to 11 hours per day for adult males (10 for women) and 62 per week (55 for women). Instances of overtime in any establishment are not to exceed 24 each year except in case of seasonal industries and like pressure of work, and provided only part of factory was affected by previously granted permits.

Special orders.—Allow exceptions and relaxations of the law, for certain establishments or classes of establishments.

Administration.—Department of Labor and subordinate factory inspection service; police and local authorities of various kinds.

Norway.

Date of enactment.—August 14, 1918; in effect on publication; continues in force 12 months after declaration of peace.

Hours of work defined.—General hours of work shall not exceed 8½ per day and 48 per week.

Persons included.—All workers in establishments designated by Crown.

Industries covered.—All industries covered by Factory Act of 1915 as follows: Handicraft and industrial establishments having the character of a factory, employing other than hand power or steam boilers, and not employing motors of 1 horsepower or over; quarries, clay and chalk pits; stone dressing employing five or more persons regularly; mines, ore dressing, and smelting works; mining and smelting; works manufacturing or using explosives; handicraft or other industrial occupations employing five or more persons outside of the workman's home; ice cutting, warehousing, packing, stevedores, etc.; building trades, water, gas, and sewer constructions; bridge building; construction of roads, railways, harbors; telegraph and telephone installations, etc.

Reduction in wages.—No provision.

Exceptions.—Extraordinary circumstances, provided authorization is secured.

Overtime.—In extraordinary circumstances by authorization.

Special orders.—Designate establishments to be governed by act.

Administration.—Ministry of Labor and subordinate factory inspection service. Special wage board of five members selected by Crown to settle disputes as to wage changes arising under the law.

Panama.

Date of enactment.—Not ascertained.¹

Hours of work defined.—Eight hours of work constitute a day's work.

Persons included.—All workers and commercial employees.

Industries covered.—All private and public undertakings whether industrial or commercial in their nature.

Reduction in wages.—No provision.

Exceptions.—Cases of urgent necessity; continuous processes; interruption likely to cause injury to interests of the public and of health; natural occurrences.

¹ Summary made from report on the 8-hour day and the 48-hour week prepared by the organizing committee for the International Labor Conference, Washington, 1919. [London, 1919.]

Overtime.—All work beyond hours stipulated is overtime and to be "remunerated accordingly." Permitted by special agreements between workers and employers.

Administration.—No provision.

Peru.

Date of enactment.—January 15, 1919 (decree by president).

Hours of work defined.—A day's work is fixed at eight hours.

Persons included.—All persons employed in industries covered.

Industries covered.—State workshops, railways, agriculture and industrial establishments, and all public works undertaken by the State. Private establishments unless otherwise agreed upon by employers and workers.

Reduction in wages.—Present wages to continue without change through reduction in hours.

Exceptions.—No provision.

Special orders.—No provision.

Administration.—Disputes as to wages arising from the application of this law, adjusted by an arbitration board of three members, two representing the parties and the third an impartial chairman chosen by the supreme court. Arbitrators must report in eight days. No provision as to enforcement of an award.

Poland.

Date of enactment.—November 23, 1918; in effect upon publication.

Hours of work defined.—Hours of labor must be limited to 8 hours daily and on Saturdays to 6 hours, exclusive of rest periods. When daily hours necessarily exceed 8 not more than 46 per week permitted.

Persons included.—All workers and employees in industries covered.

Industries covered.—All industrial establishments, mines, furnaces, workplaces, transportation by land and by water, and commercial occupations.

Reduction in wages.—Reduction in wages as result of reduced hours prohibited.

Exceptions.—Permitted only upon special authority. The 6-hour day may be any week day when agreed to by the city or local council.

Overtime.—Compensated at a higher rate than normal. Voluntary overtime agreements must be ratified by the labor inspectors; authorization required for obligatory overtime.

Special orders.—Special regulations and explanations may be issued by minister of labor and public welfare.

Administration.—Ministry of Labor and Public Welfare and subordinate factory inspection service as soon as constituted; at present, police authorities.

Portugal.

Date of enactment.—May 7, 1919; in effect May 17, 1919.

Hours of work defined.—Maximum period of work limited to 8 hours per day or 48 per week; commercial and financial institutions 7 hours per day.

Persons included defined.—All classes of employees in undertakings covered.

Industries covered.—State employment, administrative, commercial and industrial undertakings; transportation.

Reduction of wages.—Reduction of wages as result of reduced hours prohibited.

Exceptions.—Agriculture and domestic service, including hotels, restaurants, etc.; national emergency, mobilization; accidents by fire, flood, explosion, grave disaster, force majeure; special cases when authorized. Barber shops and business houses may work four hours extra on Saturdays. In dangerous and unhealthful processes further reduction in hours permitted; and if impossible to arrange work in shifts.

Overtime.—Double pay, excepting when for the State and administrative bodies and paid for under existing regulations.

Special orders.—May regulate shift-work in transportation; fix the time of opening and closing industrial and commercial establishments, and time for recreation.

Administration.—Factory inspection service and police authorities.

Russia.¹

Date of enactment.—October 26 (Nov. 11), 1917.

Hours of work defined.—The working day not to exceed 8 hours a day and 48 hours a week, including the time necessary for cleaning machinery and clearing up the works.

Persons included.—All persons working as wage earners in industries covered.

Industries covered.—All commercial and productive establishments regardless of their size and legal status.

Reduction in wages.—No provision.

Exceptions.—Night or seasonal work to satisfy public needs; preparatory work and work after the regular hours of an establishment; preservation of raw materials; danger to persons or property: water and light supply plants, heating, canalization and important public means of communication; necessary repair work; prevention of injury to machines, apparatus, etc., which might cause cessation of work; repair of damage by flood or fire: watchmen, guards, etc.

Overtime.—Double time rate; limited to 50 days in the year and to 4 hours in any two consecutive days: authorization required in most instances, and record of amount kept in all instances.

Special orders.—Required in case of exceptions covering unavoidable necessity and in restricting hours in dangerous and unhealthful occupations.

Consultation with employers and workers necessary for designation of certain holidays and permitting suspension of the law during hostilities.

Administration.—General administration of factories and mines.

Serbs, Croats, and Slovenes (Jugo-Slavia).

Date of enactment.—September 12, 1919; in effect one month after publication.

Hours of work defined.—Regular hours of labor, exclusive of rest periods, may not exceed 8 hours per day or 48 hours per week.

Persons included.—All employees in the classes of establishments covered.

Industries covered.—All industrial and handicraft establishments, mines, mercantile and transportation enterprises, whether privately or State owned, and establishments of an industrial character in agriculture and forestry.

Reduction in wages.—No provision.

Exceptions.—(1) Home-working establishments in which only members of the family of the entrepreneur are employed; (2) establishments requiring continuous operation (16-hour day permitted for adult workers once in three weeks at shift change); (3) in case of unforeseen emergencies (with modification of the proper authorities); (4) on application, the proper authorities may issue permits for a 10-hour day or a 60-hour week for a duration of 4 weeks to individual establishments or individual departments of an establishment and to seasonal industrial and handicraft establishments (these permits may be renewed not more than 3 times in a calendar year and each time for a maximum of 4 weeks); (5) cases of force majeure; (6) auxiliary work on which the beginning or termination of operation is conditioned (cleaning, attendance of boilers, machines, etc.).

Overtime.—Overtime work paid at 150 per cent of normal wages. In case of piece-work wages the forty-eighth part of the weekly earnings to be considered as the normal hourly wage.

¹ The decree is more than an 8-hour regulation and is practically a comprehensive factory law covering also the employment of women and children and night work.

Special orders.—In transport and communication enterprises (railroads, mails, telegraph, telephone, traction and steamship companies, etc.) the law is to be applicable with such amendments as are required by the nature of these enterprises. Such amendments to be determined by the proper ministers in conjunction with the minister of social welfare.

Administration.—Ministry of social welfare, industrial and mining authorities or factory and mine inspection service or political authorities.

Spain.

Date of enactment.—April 3, 1919; in effect October 1, 1919.

Hours of work defined.—The legal maximum hours of labor shall not exceed 8 per day or 48 per week.

Persons included.—All persons employed in industries covered.

Industries covered.—All industries until exceptions have been determined by administrative order.

Reduction in wages.—No provision.

Exceptions.—Determined by administrative orders to be issued not later than January 1, 1920.

Special orders.—Determine scope of law; consultation with committee representing workers and employers provided for.

Administration.—Institute of Social Reform and subordinate factory inspection service and various police authorities; advisory committees of employers and workers.

Sweden.

Date of enactment.—October 17, 1919; in effect January 1, 1920 (July 1, 1920, in case of continuous processes); operative until December 31, 1923.

Hours of work defined.—Actual hours of work exclusive of rest periods generally limited to 8 per day or 48 per week; but without exceeding the weekly limit, 8½ hour permissible the first five days of the week.

Persons included.—All employees except (a) persons in managerial positions; (b) persons doing secretarial or clerical work; (c) watchmen and (d) office employees.

Industries covered.—(1) All establishments, industrial and nonindustrial, private or municipal, employing four or more persons or located in community of over 1,500 inhabitants; (2) building construction work of every kind, provided that four persons are employed. Industries or work excluded are (1) Homework and work by members of family; (2) work of irregular or casual nature; (3) State establishments; (4) care of sick; (5) seamen, etc.; (6) forestry and lumbering; (7) agriculture and related industries; (8) transportation by rail; (9) stores, barber shops, and related establishments; (10) hotels, restaurants, etc.

Reduction in wages.—No provision.

Exceptions.—Allowed by the advisory council representing employers and workers. National emergencies may occasion overtime; work in shifts may exceed the weekly limit of 48 hours, provided the average over a period of three weeks does not exceed 48 hours. In seasonal and other trades the average of 48 hours may be prorated over a period not exceeding four weeks. In case of industrial emergencies, such as work to prevent accidents and spoiling of perishable products, work in excess of the legal limits is permitted. Undertakings which may find it necessary to close down if compelled to accept the 8-hour day may be allowed to defer the introduction of the 8-hour day upon orders by the Crown after advice of the labor council created.

Overtime.—Amount of overtime limited to 25 hours per month, and 150 hours per year for adult workers (18 years and over) and 10 hours per month in the case of young persons. Further overtime of 10 hours per month and 75 hours per year permitted by

¹ Covered by special law October, 1919. See MONTHLY LABOR REVIEW, December, 1919, pp. 258-260.

authority of factory inspector. Details respecting overtime left to collective agreements.

Special orders.—Define and limit exceptions.

Administration.—Department of Labor and subordinate factory inspection service; police authorities, courts, etc. Special advisory council representing employers and workers set up for advice in drafting regulations, etc.

Switzerland.

Date of enactment.—June 27, 1919.

Hours of work defined.—Single-shift work not to exceed 48 hours per week; if hours on Saturday are less than 8, remaining hours may be distributed over the 5 days of the week, so long as the week does not exceed 48 hours. Work at night (permitted by competent authority) not to exceed 8 hours, but in shift work it may be 9 hours.

Persons included.—All employees in industries and occupations covered.

Industries covered.—All factories or industrial establishments operated by machine power employing at least 6 persons; those not having machine power but employing at least 11 persons; those employing any persons under 18 years of age if at least 6 persons altogether are employed; establishments involving injurious or unhealthful processes.

Reduction in wages.—No provision.

Exceptions.—Allowed by competent authority in case of duly ascertained need; in case of preparatory work and work of cleaning, etc., after hours; if necessary to enable an industry to meet competition of countries working longer hours. Maximum of exception allowed is 52 hours per week.

Overtime.—Not over 2 hours per day except in case of duly ascertained need; nor for a period exceeding 10 days by district or local authority and over 10 days but not exceeding 20 days by cantonal authority, and not exceeding 24 days in general during the year. This limit may be exceeded by agreement between employers and workers in very exceptional cases (seasonal work), and if any previously issued permits have applied only to part of factory or some of the workers; but prolongation of day preceding Sundays and holidays is permitted only in case of duly ascertained need which must not lie in nature of the industry.

Special orders.—Define amount of overtime and rest periods and extent of exceptions permitted.

Administration.—Department of Industry and Commerce and the subordinate factory inspection service.

Uruguay.¹

Date of enactment.—November 17, 1915; effective February 17, 1916.

Hours of work defined.—Actual work 8 hours per day and 48 hours per week.

Persons included.—All employees in industries covered.

Industries covered.—Any factory, workshop, shipyard, stoneyard, earthworks, harbors on coasts or rivers, industrial and commercial establishments, railroads, street railway service, loading or unloading ships, and on public works.

Reduction in wages.—No provision.

Exceptions.—Such as are granted by special authorization; affect only daily hours; weekly hours may exceed 48.

Overtime.—No provision as to rate, amount, or kind.

Special orders.—The executive authority may permit extension of the daily hours in exceptional cases.

Administration.—Treasury department, the factory inspection service, and police authorities.

¹ Law summarized in the MONTHLY REVIEW for April, 1916, pp. 84, 85.

Profiteering Act of Great Britain.

IN AUGUST last the British Parliament passed a measure to be cited as "the Profiteering Act, 1919." It provides for investigation of complaints by the Board of Trade, which may also establish local committees for the handling of matters arising in the locality. The subjects to be investigated are prices, costs, and profits at all stages, and also complaints as to unreasonable profits. The board or the local committee may either dismiss the complaint on hearing, or declare the price that would yield a reasonable profit and require the return of the excess charged above such price. Violations may be punished by fine and imprisonment; false and reckless complaints also entail liability of similar punishment.

Articles covered include those designated by the Board of Trade, "being an article or class of articles declared by the order to be one or one of a kind in common use by the public, or being material, machinery, or accessories used in the production thereof." Articles subjected to other regulations, known as "controlled articles," are exempt from the provisions of this act, as are also goods for export or sales at public auction or on competitive tender. The Board of Trade has power to make regulations for the carrying out of the purposes of the act and the government of local committees. These committees may exercise in general the powers of the board except as regards the fixing of prices. Appeals may be taken to tribunals to which the decisions of local committees may be referred, and either the local committee or the appeal tribunal may refer cases to the court of summary jurisdiction for the prosecution of offenders.

The Board of Trade may take action by way of investigation on its own initiative, and is directed to do so as regards trusts, combinations, etc., connected with the regulation of prices or the production of commodities. Local committees will proceed normally on complaints submitted to them, the regulations requiring such complaints to be made within 4 days after the transaction, though this period may be extended by the local committee to not later than 14 days. Proceedings are to be public and reports of the evidence and sentences are to be published in the local press. As a further means of reducing the cost of living the Board of Trade may authorize local authorities to purchase and sell any article or articles to which this act applies, subject to such conditions as the board may impose. This business is to be carried on on a commercial basis, however, and not at public expense.

It is reported that the Board of Trade has received a large number of replies from local authorities accepting their invitation to form local committees under the act; these committees are to consist of

not less than 7 nor more than 25 members, and the working classes must be adequately represented thereon. The act itself directs the inclusion of women on all local committees.

The first schedule issued by the board, of articles to be included, contains a list of all articles of wearing apparel, all household utensils and necessities, and all material required in building; the second schedule deals with all articles of food which are not controlled. At the end of about one month from date of the enactment of the law it was reported that 900 local committees had been formed, and that appeal tribunals were being organized at such a rate that the whole country would soon be covered.

Considerable criticism of the act has been expressed. It is regarded by some as an effort to deal with trivial offenders on the complaint of persons whose names will become known to the dealers, and who will thereby incur their dislike to an extent that may cause much inconvenience, particularly in small communities. On the other hand the fault may really lie back of the dealer complained of, who is only obtaining a reasonable profit based on the high price that he was compelled to pay. The machinery is felt to be poorly coordinated and unlikely to reach effectively the real seat of the trouble. However, it is admitted that a valuable effect may be produced by the fact that a penal provision is in existence, potentially available in case of discovered extortion. The life of the act is limited to six months unless specifically extended by provision of Parliament.

Summary of Labor Legislation in Great Britain in 1919.

THE British Labor Gazette for January, 1920, publishes the following summary of labor legislation enacted in that country during the year 1919. It should be noted that the provisions of some of these measures have been given in previous issues of the MONTHLY LABOR REVIEW.

Two acts dealt with questions of wages. The Wages (Temporary Regulation) Extension Act (May 29)¹ extended for six months, until November 21, 1919, the provisions of the Wages (Temporary Regulation) Act, 1918. Until that date, therefore, the statutory obligation was imposed upon employers of paying not less than the "prescribed" rates of wages, which, broadly speaking, were the standard district rates existing at the time of the armistice. Compulsory reference to the interim court of arbitration at the request of one of the parties was also maintained in case of difference as to the existence or the amount of a prescribed rate; and in the case of women's wages, where the rate could not be easily ascertained, the Minister of Labor retained power to fix a prescribed rate by order. In addition, a rate might be substituted for the pre-

¹ The dates given after the title of acts are those of the royal assent.

scribed rate by an award of the interim court of arbitration on compulsory reference, or by an agreement approved by the Minister of Labor; and these "substituted" rates might be extended by order to the whole of the industry concerned. The Industrial Courts Act¹ (November 20) extended until September 30, 1920, certain of the main provisions of the wages (temporary regulation) acts. Statutory sanction was given to the prescribed or substituted rate in existence at the expiration of the Wages (Temporary Regulation) Act, and to the decisions as to the existence and amount of such rates given by the industrial court established in place of the interim court of arbitration.

But, except in certain circumstances in the case of women, it is no longer possible to establish a new prescribed or substituted rate having statutory authority; and the power to extend by order substituted rates, fixed by agreement, to the whole of an industry has also ceased to exist.

The Industrial Courts Act provides also a permanent supplement to the existent machinery for conciliation and arbitration. Reference may be made to the industrial court, by agreement of both parties, in regard to any matter relating to or arising out of a dispute. This step may only be taken when other means of settlement have been brought into operation without success. Other forms of arbitration tribunals than the industrial court continue, and, if both parties to a dispute desire it, can still be utilized. The act also makes provision for the full information of the Government and the public as to the facts in a trade dispute, by authorizing the Minister of Labor to set up, in case of a dispute, actual or anticipated, a court of inquiry, with authority to demand evidence and to issue a report.

The problems of employment in the coal industry gave rise during the year to two acts. The Coal Industry Commission Act (February 26) provided that a commission² should be constituted to inquire into the position of and conditions prevailing in the industry, with special reference *inter alia* to wages, hours of work, cost of production and distribution, selling prices and profits, and the social conditions of colliery workers. The Coal Mines Act, 1919 (August 15), provided, in accordance with the interim report of the commission, for the reduction, from eight to seven, of hours of labor of coal mine workers below ground as from July 16, 1919, and makes provision, contingent upon the conditions of the industry, for a further reduction in 1921.

Two acts dealt with special problems arising from war conditions. The Restoration of Prewar Practices Act³ (August 15) redeems the pledges given to trade-unions in return for their withdrawal of restrictive practices during the war. It requires owners of establishments to which the act applies—mainly those engaged on munitions work—to restore or permit the restoration of any trade rules, practices, or customs obtaining before the war which had been departed from during and in consequence of the war, and to permit the continuance of such trade practices for one year. The Disabled Men (Facilities for Employment) Act (July 22) enables arrangements to be made to relieve or indemnify employers in respect of the whole or part of any increase of expenditure arising from his liability to pay compensation in respect of accidents or industrial disease, where such increase is attributable to the employment of men disabled in the war. The act, which is administered by the Home Office, is given effect, in general, by agreements entered into with the insurance companies, who accept disabled men at the ordinary rates, and are indemnified by the Government against extra expenditure.

Four acts amended previous legislation providing for social services. The National Health Insurance Act, 1919 (August 15), increases from £160 to £250 per annum the rate

¹ This act was published in the MONTHLY LABOR REVIEW for February, 1920 (pp. 41-45).

² Articles dealing with the appointment and reports of this commission were published in the MONTHLY LABOR REVIEW for May, 1919 (pp. 109-114), August, 1919 (pp. 78-86), and October, 1919 (pp. 23-30).

³ An account of the introduction of this bill, its important features, and the attitude of unskilled labor toward it, was given in the MONTHLY LABOR REVIEW for October, 1919 (pp. 30-35).

of remuneration for the purpose of exemption from insurance under the national health insurance acts. The National Insurance (Unemployment) Act (December 23) raises from 7s. to 11s. per week the rate of benefit payable to workpeople insured under the National Insurance (Unemployment) Acts, 1911-1918. The Workmen's Compensation (War Addition) Amendment Act¹ (December 23) increases the additional weekly sum from one-quarter to three-quarters of the amount of the weekly payment, and also extends the application of the act of 1917, as amended, to persons entitled to compensation under the acts of 1897 and 1900. The Old Age Pensions Act¹ (December 23) increases the weekly rates of old-age pensions, the new maximum being 10s. per week, and makes various other provisions and amendments to earlier acts.

The Checkweighing in Various Industries Act² (August 15) provides for "checking the weight or measurement of materials produced, handled, or gotten by workmen paid by weight or measure in certain industries," including the production or manufacture of iron or steel, the loading or unloading of goods into or from vessels, the getting of chalk or limestone from quarries, and the manufacture of cement and lime. Provision is made for the inclusion of other materials by regulation.

The Police Act (August 15) constituted the police federation, and prohibits members of police forces from being members of trade-unions.³

In addition to the acts mentioned above, bills have been introduced by the Minister of Labor providing for (a) the establishment of a maximum working week of 48 hours, subject to certain exceptions; (b) the constitution of a commission to inquire into and report on minimum time rates of wages; (c) the extension of the contributory scheme of unemployment insurance to substantially all persons falling within the health insurance scheme, except those engaged in agriculture and domestic service.⁴ These bills are to be dealt with in the next session of Parliament.

¹ This act is noted in this issue of the MONTHLY LABOR REVIEW (p. 181).

² This act was noted in the MONTHLY LABOR REVIEW for February, 1920 (pp. 238, 239).

³ This act applies to Great Britain only; a similar measure for Ireland was the Constabulary and Police (Ireland) Act, which received royal assent on November 20.

⁴ In Ireland the bill applies only to workmen in the trades now insured against unemployment.

LABOR ORGANIZATIONS.

Annual Convention of International Seamen's Union of America, January, 1920.

THE determination of the International Seamen's Union of America to defend and uphold the Seamen's Act against all attacks in Congress and in the courts, and to initiate an active counter propaganda against the campaign which the union alleges is being carried on to misrepresent and discredit the act, was strongly emphasized at the twenty-third annual convention of the union, which was held in San Francisco, January 12-22, of this year.¹ The convention went on record as being opposed to any and all amendments intended to bring about a repeal of the law and empowered its legislative committee to take any action it may deem necessary to preserve the law.

In his annual address to the convention, President Andrew Furuseth spoke of the struggles of the seamen to attain their present position and to defeat the campaign to nullify or repeal the Seamen's Act. Criticism was voiced of some of the rulings made by the Department of Commerce in the enforcement of the act, although Mr. Furuseth stated that "the trouble is more in the system that places the material of the merchant marine—the vessel—under the same department with the personnel—the seamen." He urged indorsement by the convention of the recommendation of the Secretary of Labor to Congress that jurisdiction of the personnel of the merchant marine be transferred to the Department of Labor, and also of the bill drafted by authority of the executive board of the union for submission to Congress providing for such transfer. The convention subsequently acted favorably upon a resolution to this effect and providing "that the legislative committee be instructed to consult with the Secretary of Labor, with the Masters, Mates, and Pilots of the United States, and the Marine Engineers' Benevolent Association to the end that we may, if possible, be united by the final form of the bill before it is introduced."

President Furuseth pointed out the potential danger to the seamen's act from the labor clause in the covenant of the League of Nations and to the hostile attitude of foreign shipowners. The friendly attitude of the organized seamen of Europe toward the act and the enactment of similar legislation in Scandinavian and other

¹ Report summarized from *The Seamen's Journal*, San Francisco, Jan. 14, 21, 28, 1920.

maritime nations were referred to in showing the need of close affiliation with the International Seafarers' Federation in order to advance the interests of all seamen. He said:

To accomplish our purpose we must be associated with the seamen of the world and send delegates to the gatherings of the representatives of the seamen from different countries. We need them. They need us. We all need the strength that comes from knowing each other, and the help that we can give to each other industrially and legislatively. We must all become free, or we shall again all become slaves.

The convention later decided to send three delegates to the next conference of the International Seafarers' Federation which will be held in Europe this summer, and "to cooperate with the organized seamen of all countries in securing for them the rights conferred to seamen under the American flag by the Seamen's Charter of Freedom, the Seamen's Act."

Work of the Convention.

MORE than two days of the convention's time was devoted to a thorough discussion of the problems confronting the seamen of America and at the conclusion of the deliberation a recommendation was made to all affiliated unions that, in view of the very unsettled industrial conditions, they give most careful and painstaking consideration to all movements either to advance or lower existing wages and working rules. Unqualified indorsement was given to the principle of the eight-hour working day for all seamen, and a resolution was passed approving the action of the Railroad Administration in recognizing the fundamental right of the 48-hour week and time and one-half as overtime for any work done in excess thereof, but protesting against the exclusion of that class of employees called "marine workers of floating equipment department." It was decided to work for the early enactment of the Federal seamen's compensation bill, now pending in the United States Senate, to urge Congress to abolish the present recruiting and training service of the Shipping Board and instead make every merchant ship a training vessel for American youths, and to favor private ownership and operation of merchant vessels "because Government ownership of ships has had the tendency to establish Government ownership of seamen." The convention disapproved of the Rowe bill which has passed the House and is now in the Senate and which would amend the law so that a person might become an able seaman after serving six weeks in a training vessel or by passing the examination required after six weeks of such training and serving nine months in a merchant vessel. The present law permits any person who has been at sea for one year to become an able seaman upon passing an examination proving his fitness for the rating. The proposed law was said to be "vicious," and in the resolution adopted it was held that "no man can learn an

able seaman's duties in such short time" and that "it is the real interest of the safety at sea and our ability to compete that the efficiency [of the seamen] be increased in place of being decreased."

The convention decided to establish permanent offices for the union at Washington, D. C., and to continue organizing work in the ports of the United States and Canada and particularly on the Great Lakes until every seaman and fisherman is a member of the union. The report of the secretary showed the membership of the union to have increased from 50,000 in 1918 to 75,000 in 1919.

By occupation groups the membership was reported as follows:

MEMBERSHIP OF INTERNATIONAL SEAMEN'S UNION, 1918 AND 1919, BY OCCUPATION GROUP.

Occupation group.	1918	1919
Cooks.....	7,200	9,400
Fishermen.....	9,600	8,600
Firemen.....	14,700	27,000
Sailors.....	18,500	30,000
Total.....	50,000	75,000

By districts, in 1919, 48,000 were credited to the Atlantic district, 18,000 to the Pacific district, and 9,000 to the Great Lakes district. Approximately 50 per cent of the membership at the beginning of 1920 was native born, while just prior to the war the native-born membership was only 20 per cent. Andrew Furuseth was reelected president and T. A. Hanson secretary-treasurer for the coming year. Philadelphia was selected as the place for holding the next convention.

Activities of German Trade-Unions.

Membership of General Trade-Union Federation.

IN SEPTEMBER, 1919, the German General Trade-Union Federation, the central organization of the Free (Social-Democratic) Trade-Unions, had a membership of approximately 6,400,000 organized in 54 federations.¹ Of these 5,327,000, or about five-sixth of the total, belong to 12 federations, each of which has 100,000 or more members.

FEDERATIONS OF THE GERMAN FREE TRADE-UNIONS WITH A MEMBERSHIP OF 100,000 OR OVER IN SEPTEMBER, 1919.

Federation.	Membership.	
	Before the war.	In September, 1919.
Metal workers.....	531,991	1,350,000
Factory workers.....	207,330	506,000
Transport workers.....	228,207	450,000
Mine workers.....	101,956	422,600
Railwaymen.....		420,000
Building trades.....	309,562	400,000
Agricultural workers.....	22,531	400,000
Textile workers.....	133,034	370,000
Salaried employees.....	35,219	350,000
Wood workers.....	192,465	310,000
Municipal workers.....	54,522	250,000
Tailors.....	49,145	100,000
Total.....	1,855,962	5,327,000

With respect to the membership figures given in the preceding table it should be noted that the railwaymen's federation was not established until July, 1916, and that the salaried employees' federation was formed in 1919 by the amalgamation of two other federations.

Commenting on the rapid growth of the membership of the Free Trade-Unions an article in *Correspondenzblatt*² says:

German Free Trade-Union membership is making rapid strides from the sixth into the seventh million. Considerably more than half of the members are persons who have joined a trade-union for the first time. These must be trained to be good trade-unionists. This training has for many years been the task of the trade-unions, but it has never been so big and difficult a task as it is now. Hitherto the old members were in the majority in the local unions, the district councils, federations, and conferences. Now the new members are in the majority. The minority has to teach the majority. The new members have been in the trenches for four years, and their experiences have left a mark. They are not shy and retiring as new members were in the old days. The characteristic of the masses of the workers to-day is a deep-seated feeling of bitterness and mistrust toward everything and everybody. All this must be taken into consideration. New members must not be called "November Socialists" and must not be referred to as "those who have just crept into the organization." The youthfulness of the new members must not constitute a cause of reproach.

¹ *Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands.* Berlin, Sept. 20, 1919.

² *Correspondenzblatt.* Berlin, Sept. 13, 1919.

Metal Workers' Federation.

THE proceedings at the general conference of the Metal Workers' Federation held at Stuttgart in October were of great importance for the development of industrial conditions in Germany.¹ For the first time in the history of the federation the delegates belonging to the Independent (radical) Socialist Party gained the upper hand in this, the largest German trade-union federation, and appointed its representatives as leaders. This majority has declared itself against joint industrial leagues (*Arbeitsgemeinschaften*) of representatives of trade-unions and employers' associations. Its manifesto states that "the general conference recognizes no form of negotiations with employers other than those rendered necessary by industrial disputes." An Industrial Workers' Federation (*Industrieverband*), composed of all manual and brain workers in the metal industry, is to be formed, to continue the fight for the possession of the means of production and the abolition of capitalism.

The passing of the leadership of the Metal Workers' Federation into the hands of the Independents means, it is stated, that the joint industrial league in the metal industry has broken up, and that if this process is repeated in other trade-union federations, the existence of the central industrial league of workers' and employers' organizations will be threatened. The movement which aims at industrial dictatorship through the works' councils is undermining the practical beginnings made by the joint industrial leagues toward giving the workers an effective share in the control of production. The manifesto recognizes only those conferences with employers which are necessitated by industrial disputes, and excludes cooperation in productive tasks. The fact of the continued existence of capitalistic enterprise is thus recognized, but organized workers are deprived of the measure of participation in the control of production which they had gained. These leaders, it is added, are evidently afraid of developing the joint industrial leagues and cooperating with the employers. But they will find, after some practical experience as leaders of the unions, that they are obliged to cooperate in the control of production. The idea of the industrial joint league will be resuscitated in one form or another by its present opponents.

The *Metallarbeiter-Zeitung*² publishes the following excerpts from the new by-laws of the Metal Workers' Federation operative as from October 13, 1919:

Strike benefit.—First-class members (men), 5 marks³ per diem, or 30 marks weekly; second class (women 16 years of age and over), 3 marks, or 18 marks weekly; third

¹ Vorwärts. Berlin, Oct. 25, 1919.

² *Metallarbeiter-Zeitung*. Stuttgart, Nov. 15, 1919.

³ Owing to fluctuations in exchange value conversions into United States money are not made. The normal par value of the mark is 23.8 cents, and of the pfennig 0.238 cent.

class (children under 16 years of age), 2 marks, or 12 marks weekly. For their wives married members of the first class are to receive in addition 1 mark per diem, or 6 marks weekly, and of the second class, 50 pfennigs, or 3 marks. For each child at home, 50 pfennigs daily, or 3 marks weekly, is to be paid. Should the person have been a member for less than 26 weeks the strike benefit is to be: First class, 18; second class, 15; third class, 9 marks weekly; and for wives and children at home, 3 marks weekly. Operative as from December 28, 1919.

Initiation fee and contributions.—The initiation fee has been fixed at 1 mark for adult male members and at 50 pfennigs for women and for boys under 16 years of age. The weekly contribution is to be 1.20 marks for men, 60 pfennigs for women of 16 years and over, and 30 pfennigs for boys and girls under 16 years of age.

Traveling and removal benefit.—The traveling benefit is to be 2 marks per day. The removal benefit varies according to length of membership. Membership of from 52 to 156 weeks and removal to a locality distant 25 to 150 kilometers (15.5 to 93.2 miles) is allowed 40 marks, and above 150 kilometers (93.2 miles) 60 marks in the first class; in the second class, 20 and 30 marks, respectively, are allowed. When the period of membership exceeds 11 years, the amounts allowed for the same distances rise to 120 and 180 marks in the first class and 60 and 90 marks in the second class.

Unemployment and sick benefit.—Unemployment and sick benefit is granted for 20 weeks at rates varying according to length and class of membership. In class 1 the weekly benefit varies between 7 and 12 marks, in class 2 between 4.75 and 8 marks, and in class 3 between 3.50 and 6 marks.

Death benefit.—Death benefit is paid according to class and length of membership, as follows: Fifty-two weeks' membership entitles to 60, 30, and 13 marks, respectively, and after 11 years' membership the benefit reaches a maximum of 200, 100, and 50 marks.

Notice for offensive action.—Notice of at least one month must be given before any offensive action is taken. No stoppage of work may take place until the matter in dispute has been laid before the conciliation authority and not unless three-fourths of the members affected have voted for such cessation of work.

LABOR BUREAUS.

Organization of Massachusetts Department of Labor and Industries.

THE so-called consolidation act (Mass. Gen. Acts, 1919, ch. 350) provided for the organization in 20 departments of all of the executive and administrative functions of the Commonwealth, except such as pertain to the governor and council and such as are exercised and performed by officers serving directly under the governor and council. The functions of the new department of labor and industries (one of the 20 departments established by the act) comprise those formerly vested in the board of labor and industries, the bureau of statistics (in part), the board of conciliation and arbitration, the minimum wage commission, the commissioner of standards, and the surveyor of lumber.

The act provides that the department shall be under the supervision and control of a commissioner, to be known as the "commissioner of labor and industries," an assistant commissioner, who may be a woman, and three associate commissioners, one of whom shall be a representative of labor, and one a representative of employers of labor, all of whom shall be appointed by the governor with the advice and consent of the council. The commissioner is the executive and administrative head of the department and has charge of the administration and enforcement of all laws, rules, and regulations which it is the duty of the department to administer and enforce. He is also required (among other duties) to prepare, for the consideration of the associate commissioners, rules and regulations, in accordance with existing law, for the carrying out of the provisions of this act relative to the department, which rules must first be approved by the associate commissioners before becoming effective. In addition to acting in an advisory capacity the associate commissioners constitute a board to be known as the "board of conciliation and arbitration," which has the authority and exercises the functions heretofore vested in the board of conciliation and in the minimum wage commission, except as to matters of an administrative nature.

The act authorizes the commissioner to organize the department in such divisions as he may from time to time determine and to assign the officers and employees of the department thereto, and authorizes the commissioner and associate commissioners, with the approval of the governor and council, to appoint and fix the salaries of not

more than five directors, each of whom shall be assigned to take charge of a division of the department. The plan of organization as at present in effect and its directing personnel are as follows:

Commissioner of Labor and Industries: Gen. E. Leroy Sweetser.

Assistant Commissioner: Miss Ethel M. Johnson.

Associate Commissioners: Mr. Herbert R. Wasgatt; Mr. Edward Fisher; Mr. Samuel Ross.

Directors:

Division of Industrial Safety: Mr. John P. Meade, director.

Division of Statistics: Mr. Roswell F. Phelps, director.

Division of Standards: Maj. Francis Meredith, director.

United States Employment Service: Gen. E. Leroy Sweetser, federal director; Roswell F. Phelps, assistant federal director.

In the process of consolidation the function of the several boards, etc., now vested in the department of labor and industries were transferred in toto to the new department, except in the case of the former bureau of statistics, whose functions were distributed among three departments, as follows:

1. The duties of collecting, arranging, and publishing statistical information relative to the commercial and industrial conditions of the people, and the productive industries of the Commonwealth usually designated as the statistics of labor and manufactures, and the establishment and maintenance of public employment offices and all other duties not otherwise provided for by the act, were transferred to the department of labor and industries (section 69) and are now performed by the division of statistics of that department.

2. The duty of taking the decennial census of the Commonwealth and of collecting, compiling, and publishing information in connection therewith, and the duty of making the enumeration of summer residents of certain towns were transferred to the secretary of the commonwealth (section 25).

3. The duties of compiling municipal statistics, of auditing of municipal accounts, and of certifying notes of towns and districts were transferred to the department of corporations and taxation (section 52).

Although the former minimum wage commission, as such, was abolished by the consolidation act, its functions are now vested in the associate commissioners of the new department of labor and industries, who are authorized to establish wage boards, enter decrees, and issue special licenses as formerly done by the commission. When acting in this capacity, the associate commissioners and the assistant commissioner, who is in immediate charge of minimum wage matters, direct the work of the division of minimum wage.

With reference to the division of standards, it should be stated that the term "standards" has reference to weights and measures

and not to the industrial code. The functions of this division now embrace those of the former commissioner of standards and surveyor general of lumber.

Under the consolidation act the industrial accident board, which administers the workmen's compensation act in Massachusetts, is continued without change as a department entirely separate from the department of labor and industries, and certain former joint functions of these two departments are now vested in the latter department. Thus the law provides that the duties of factory inspection and accident prevention shall be performed by the department of labor and industries. The reporting of accidents, however, is made to the department of industrial accidents, which takes over the functions of the industrial accident board, and this department is the only source from which accident experience is available.

The following sections of the consolidation act (Mass. Gen. Acts, 1919, chap. 350, secs. 69-78) refer specifically to the organization of the department of labor and industries:

SECTION 69. The board of labor and industries, existing under authority of chapter 726 of the Acts of 1912 and acts in amendment thereof and in addition thereto; the board of conciliation and arbitration, existing under authority of chapter 514 of the Acts of 1909, as amended by chapter 681 of the Acts of 1914, and acts in amendment thereof and in addition thereto; the minimum wage commission existing under authority of chapter 706 of the Acts of 1912, and acts in amendment thereof and in addition thereto; the office of commissioner of standards, existing under authority of chapter 534 of the Acts of 1907 and of chapter 218 of the General Acts of 1918; and the office of surveyor general of lumber, existing under authority of chapter 60 of the Revised Laws, are hereby abolished. All the rights, powers, duties and obligations of the said boards, commissions and offices, or of any member or official thereof, and those of the bureau of statistics, or the director thereof, with respect to collecting, arranging, and publishing statistical information relative to the commercial and industrial condition of the people, and the productive industries of the Commonwealth, usually designated as the statistics of labor and manufactures, and with respect to the establishment and maintenance of public employment offices and with respect to all other matters not otherwise provided for by this act, are hereby transferred to and shall hereafter be exercised and performed by the department of labor and industries, established by this act, which shall be the lawful successor of said boards, commissions, and offices and of said bureau of statistics, and the director thereof, with respect to the said rights, powers, duties, and obligations. The powers and duties conferred and imposed upon the industrial accident board by section 18 of Part IV of chapter 751 of the Acts of 1911 are also transferred to and shall hereafter be exercised and performed by said department.

SEC. 70. The department of labor and industries shall be under the supervision and control of a commissioner, to be known as the commissioner of labor and industries, an assistant commissioner, who may be a woman, and three associate commissioners, one of whom shall be a representative of labor and one of whom shall be a representative of employers of labor, all of whom shall be appointed by the governor, with the advice and consent of the council. The first appointment of the commissioner and assistant commissioner shall be for the term of three years, and of the associate commissioners for the terms of one, two and three years, respectively. Thereafter as the terms expire the governor shall in like manner appoint the said commissioners for terms of three

years, shall fill any vacancy for the unexpired term, and may, with the consent of the council, remove any commissioner. The commissioner shall receive such annual salary not exceeding \$7,500, and the assistant commissioner and associate commissioners such annual salary, not exceeding \$4,000 each, as the governor and council may determine.

SEC. 71. The commissioner shall be the executive and administrative head of the department. He shall have charge of the administration and enforcement of all laws, rules, and regulations which it is the duty of the department to administer and enforce, and shall direct all inspections and investigations except as is otherwise provided herein. He may organize the department in such divisions as he may from time to time determine, and may assign the officers and employees of the department thereto. He shall prepare for the consideration of the associate commissioners, rules and regulations, in accordance with existing law, to carry out the provisions of this act relative to the department. All rules and regulations so prepared shall take effect, subject to the provisions of chapter 307 of the General Acts of 1917 where applicable, when approved by the associate commissioners, or upon such date as they may determine. The commissioner may designate an associate commissioner to discharge the duties of the commissioner during his absence or disability.

SEC. 72. The associate commissioners shall constitute a board to be known as the board of conciliation and arbitration, which shall have the authority and exercise the functions heretofore vested in the board of conciliation and arbitration and in the minimum wage commission, except as to matters of an administrative nature, and in pursuance of the said authority shall, if they deem it necessary, investigate immediately the circumstances of any industrial dispute which arises, shall establish wage boards and review their reports, and may issue special licenses under the provisions of section 9 of chapter 706 of the Acts of 1912. In all investigations and proceedings conducted by said associate commissioners they shall have authority to summon witnesses, to administer oaths, to take testimony and to require the production of books and documents. In any controversy referred to the board on a joint application under any arbitration agreement they shall employ special experts at the request of either party. One such expert shall be selected from a list furnished by each party to the controversy. The expense of such experts shall be borne by the Commonwealth. They shall be assigned such assistants from the officers and employees of the department as the commissioner and they shall from time to time determine. The fees of witnesses before the associate commissioners for attendance and travel shall be the same as those of witnesses before the superior court, and shall be certified and paid in accordance with the provisions of section 15 of chapter 514 of the Acts of 1909, and acts in amendment thereof and in addition thereto.

SEC. 73. In all matters relating specifically to women and minors the assistant commissioner shall have and exercise such duties and authority as may be prescribed by the commissioner with the approval of the associate commissioners.

SEC. 74. The commissioner and associate commissioners may, with the approval of the governor and council, appoint, and fix the salaries of, not more than five directors, and may, with like approval, remove the directors. Each director shall be assigned to take charge of a division of the department. The commissioner may also, subject to the civil service law and rules, where they apply, employ and remove such experts, inspectors, investigators, clerks, and such other assistants as the work of the department may require, and, subject to the provisions of chapter 228 of the General Acts of 1918, and the rules and regulations established thereunder, and to the approval of the governor and council, where that is required by law, fix the compensation of the said persons. The commissioner may require that certain inspectors in the department, not more than seven in number, shall be persons qualified by training and experience in matters relating to health and sanitation.

SEC. 75. All directors, inspectors, and other permanent employees of the department shall devote their whole time to the affairs of the department, and all directors and inspectors, and such other employees as may be designated by the commissioner, shall, before entering upon their duties, be sworn to the faithful performance thereof. Inspectors shall have the police powers granted by existing law to the inspectors of the board of labor and industries, except that those assigned to exercise the functions now exercised by the commissioner of standards shall have the powers now possessed by inspectors appointed by the commissioner of standards.

The number of inspectors employed by the department shall not, at first, exceed the number of inspectors in the service of the boards, commissions, and bureaus hereby abolished, and shall not thereafter be increased without the approval of the governor and council. The commissioner and associate commissioners shall determine from time to time how many of the inspectors employed shall be women. Section 10 of chapter 726 of the Acts of 1912 shall apply to inspectors appointed under the provisions of this section.

SEC. 76. The commissioner and associate commissioners may appoint committees, on which employers and employees shall be represented, to investigate and recommend rules and regulations, and changes in existing rules and regulations, within the scope of the powers and duties of the department.

SEC. 77. All the rights, powers, duties, and obligations of the commissioner of standards and the surveyor general of lumber shall be assigned to a division of the department, and the director in charge of said division shall be known as the director of standards. He shall exercise the functions of the commissioner of standards and the surveyor general of lumber, and shall perform such other duties as may be assigned to him by the commissioner.

SEC. 78. Any person affected by an order, rule, or regulation of the department may, within such time as the associate commissioners by vote may fix, which shall not be less than 10 days after notice of the order, or the taking effect of the rule or regulation, appeal to the associate commissioners, who shall thereupon grant a hearing, and after the hearing may amend, suspend, or revoke such order, rule, or regulation. The commissioner may, pending such hearing, grant a temporary suspension of the order, rule, or regulation appealed from. Any person aggrieved by an order approved by the associate commissioners may appeal to the superior court: *Provided*, That the appeal is taken within 15 days after the date when the order is approved. The superior court shall have jurisdiction in equity upon such appeal, to annul the order, if it is found to exceed the authority of the department, and upon petition of the commissioner, to enforce all valid orders issued by the department. Nothing herein contained shall be construed to deprive any person of the right to pursue any other lawful remedy.

CONCILIATION AND ARBITRATION.

Adjustment of Industrial Disputes in Kansas and Colorado.

Kansas Court of Industrial Relations.

THE action of the Legislature of Kansas in January of this year in establishing a special tribunal as a court of industrial relations has attracted widespread attention. The court consists of three judges appointed by the governor, with the advice and consent of the senate, for three-year terms, and was immediately (Feb. 2) organized. This court is given the powers previously held by the State public utilities commission, which is abolished. However, its principal powers, from the standpoint of immediate interest, relate to the regulation of designated classes of employments, industries, etc., "declared to be affected with a public interest and therefore subject to supervision by the State." Included are the manufacturing of food products and clothing, and processes connected therewith; the mining or production of fuel; transportation, and all public utilities and common carriers as defined by existing statutes of the State.

The court has power to make investigations, serve process, take testimony, and adopt rules and regulations to govern its own proceedings. Appeal lies to the supreme court from its findings. The public welfare is declared to require continuity and efficiency in the operation of the industries, etc., named; the willful hindering, delay, limiting, or suspension of such operations are therefore declared to be contrary to the purpose of the act. The court may act on its own initiative, or upon the complaint of either party to a controversy, or of ten citizen taxpayers of the affected community, or of the attorney-general of the State. Investigation may extend to the conditions surrounding the workers, their wages, returns to capital, the rights and welfare of the public, "and all other matters affecting the conduct of said industries, employments, public utilities, or common carriers."

The court is authorized to order any changes necessary in the matter of working and living conditions, hours of labor, rules and practices, and a reasonable minimum wage or standard of wages. Appeal may be taken within 10 days to the supreme court. If after 60 days' compliance the order is found to be unjust, unreasonable, or impracticable, the aggrieved party may apply for a modification,

and a hearing shall thereupon be had and the court of industry may modify its orders for cause shown.

Enforcement is by process issuing from the supreme court on proceedings by the industrial court. Persons willfully violating the provisions of the act or any valid order of the court are liable to fine not exceeding \$100 or imprisonment not exceeding one year, or both. Officers of corporations or of labor unions who use their official positions willfully to influence or compel violations are guilty of a felony and may be punished, upon conviction thereof, by a fine not exceeding \$5,000, or imprisonment at hard labor for not exceeding two years, or both. In case production or operation is suspended, the court may take proceedings for the taking over and operation of the industries or work affected. In any case a fair wage is to be paid the workers and a fair return allowed the owners.

It is an offense to do or perform any forbidden act, or fail or refuse to perform any act enjoined or directed by the court, acting either singly or in confederation with others; or to induce or intimidate any employer or worker to violate the orders of the court whether negatively or positively. Picketing, threats, abuse, or other forms of intimidation are unlawful in connection with the employments, industries, etc., governed by the act.

Unions of workers are recognized, as is the right of collective bargaining. Individual workers are guaranteed freedom of action in making or terminating contracts, but it is unlawful for individuals to conspire with other persons to quit employment for the purpose of hindering, delaying, or interfering with the operation of industries covered by the act. Employees testifying as witnesses or otherwise active in securing the attention or action of the court may not be discharged or discriminated against because of such action.

This is the most comprehensive attempt yet made to protect the public in cases of industrial disputes likely to affect its interests. The act has attracted attention in other States and in Congress, but it is too soon to announce any definite results under it. One point of interest in connection therewith is the establishment of a minimum wage for men. Kansas, in common with a number of other States, chiefly western, has a commission charged with the fixing of a minimum wage for women and for minors; but no State has thus far sought to fix a minimum wage for adult males. An initiative act has been proposed and filed with the Secretary of State, in the State of Oregon, looking toward the fixing of a minimum wage for both men and women; but the house resolutions committee of the State legislature directed its chairman to draft a resolution expressing the opposition of the legislature to the proposed law.

Colorado Industrial Commission.

THE nearest approach to the Kansas statute is an act of the State of Colorado, enacted in 1915, creating an industrial commission, and conferring upon it certain powers as to the adjustment of industrial disputes. This act is patterned to some extent after the Canadian Industrial Disputes Acts, and makes it unlawful for employers to declare or cause a lockout, or for employees to go on a strike prior to or during an investigation or arbitration of a dispute. This act received its first test in this regard during the coal strike of November last, a restraining order against the proposed strike of November 21 being issued under it by the District Court of the City and County of Denver. In obedience thereto the district officers of the miner's union recalled their strike order, resulting, it is claimed, in a production of coal more nearly normal than in any other State of that section of the country. However, the union attacked the law on the ground of its claimed unconstitutionality, and some technical questions as to its enactment. The act limits its application, at least in the case of lockouts, to industries "affected with a public interest." In its later deliberations the district court, without suggestion from either party, injected the test of public interest into the case in hand, and ruled that underground mines are not affected with a public interest and fall outside the act. The case has been carried to the supreme court on a writ of error for a decision on this subject, as well as on the constitutional questions, and it will be of interest to know what conclusion shall be reached by the court on these points. However, it seems obvious enough that coal mines are affected with a public interest, so that the main concern is with the validity of the act that undertakes to prevent the cessation of industrial operations on grounds of the public concern until suitable time for investigation has elapsed.

Though this first legal process for enforcement has thus been opposed, the commission reports results of great value flowing from the operations of the law.¹ Since its enactment in 1915, "this State has been comparatively free from labor trouble, and has been absolutely free from any protracted strike; and bloodshed, violence, and the destruction of property have been unknown."

The law requires 30 days' notice before a strike or lockout is actually engaged in; and this provision, "against which violent criticism has been directed, has saved the situation innumerable times." This period permits opportunity for conciliatory efforts, which have many times been successful. If this fails, informal conferences often afford a means of arriving at an understanding; while in other cases, formal hearings and awards are resorted to. From March, 1917, when the

¹ Second Report of the Industrial Commission of Colorado, 1917-18, pp. 98-121.

present commission took office, up to November 1, 1918, the commission handled controversies involving 1,430 employers and 28,888 employees. There were 196 cases reported to the commission, of which 145 were reported with the statutory 30 days' notice; 32 resulted in strikes of from 1 to 65 days' duration, but all were settled, the men returning to work. The record is believed to show "ample justification for the enactment and continued existence of the law," which all interests "are coming to view as a step in the right direction."

IMMIGRATION.

Opinion of Secretary of Labor With Regard to Membership in Communist Party.

THE deportation of one Englebrert Preis, an Austrian, alleged to be a member of the Communist Party of America and liable to deportation under the act of October 16, 1918, having arisen, the Secretary of Labor, Hon. W. B. Wilson, rendered the following opinion approving the recommendation of the Commissioner General of Immigration that Preis be sent back to his native country:

In re Englebrert Preis.

Age, 31; native of Austria; entered the United States at Port Huron, Mich., on November 13, 1915, having arrived in Quebec by S. S. *Scotan*, June 14, 1914. This is a case arising under the provisions of the act of October 16, 1918.

It is alleged that the alien is a member of the Communist Party of America, which is affiliated with the Communist International. The alien admits membership in the Communist Party of America, and that it is affiliated with the Communist International. The sole question, therefore, to be determined by the Secretary of Labor is: Is the Communist Party of America such an organization as is described in the act of October 16, 1918, membership in which makes an alien liable to deportation. The language of the act applicable to this particular case is as follows:

SECTION 1. * * * aliens who are members of or affiliated with any organization that entertains a belief in, teaches, or advocates the overthrow by force or violence of the Government of the United States. * * *

SEC. 2. * * * shall, upon the warrant of the Secretary of Labor, be taken into custody and deported in the manner provided in the immigration act of February 5, 1917.

It will be observed that belief in, teaching, or advocating the overthrow of the Government of the United States is not alone sufficient to bring any organization within the scope of the act. There must in addition be a belief in, teaching, or advocacy of force or violence to accomplish the purpose. Bearing that in mind we may proceed to an examination of the facts.

The manifesto and program and constitution of the Communist Party of America and the manifesto of the Communist International are submitted in evidence and their authenticity admitted. The

constitution of the Communist Party (see p. 19 of the manifesto) requires that—

SEC. 2. Applicants for membership shall sign an application card reading as follows:

The undersigned after having read the constitution and program of the Communist Party, declares his adherence to the principles and tactics of the party and the Communist International; agrees to submit to the discipline of the party as stated in its constitution and pledges himself to engage actively in its work.

An examination of the documents submitted clearly demonstrates the fact that it is the purpose of the Communist Party to overthrow the Government of the United States. There are many statements that might be quoted showing that purpose. The two following are typical. On page 9 of the manifesto and program the statement is made:

Communism does not propose to "capture" the bourgeois parliamentary State, but to conquer and destroy it.

And again on the same page:

The proletarian class struggle is essentially a political struggle. * * * The objective is the conquest by the proletariat of the power of the State.

Many other statements of similar purport are to be found in the same document. After having found that it is the purpose of the Communist Party to conquer and destroy the Government of the United States the next point of inquiry is as to how the conquest is to take place.

It is apparent that the Communist Party does not seek to attain its objective through the parliamentary machinery of this Government, established by, and operated under, the Constitution. That is made sufficiently clear by the following excerpt from page 15 of the manifesto referred to:

(b) Participation in parliamentary campaigns, which in the general struggle of the proletariat is of secondary importance, is for the purpose of revolutionary propaganda only.

And again from pages 9 and 10 of the same document:

In those countries where the conditions for a workers' revolution are not yet ripe, the same process will go on. The use of parliamentarism, however, is only of secondary importance.

And further on page 10:

The parliamentarism of the Communist Party performs a service in mobilizing the proletariat against capitalism, emphasizing the political character of the class struggle.

Communist Party's Attitude Toward Strikes.

THE parliamentary processes established by our Government are to be discarded or used for propaganda purposes only and other means adopted for overthrowing the Government of the United States. These means are stated at considerable length and frequently reiterated, seemingly for purposes of emphasis. The conquest of the power of the State is to be accomplished by the mass power of the proletariat.

Strikes are to be broadened and deepened, making them general and militant, and efforts made to develop their revolutionary implications. The strike is to be used not simply as a means to secure redress of economic wrongs, but as a means through which the Government may be conquered and destroyed. A few excerpts from the Communist Party and Communist International manifestos will make these statements evident.

Thus on page 10 of the manifesto and program of the Communist Party of America is the following:

The conquest of the power of the State is accomplished by the mass power of the proletariat. Political mass strikes are a vital factor in developing this mass power, preparing the working class for the conquest of capitalism. The power of the proletariat lies fundamentally in its control of the industrial process. The mobilizing of this control against capitalism means the initial form of a revolutionary mass action that will conquer the power of the State.

And again, on page 11 of the same document:

Mass action is industrial in its origin, but it acquires political character as it develops fuller forms. Mass action, in the form of general political strikes and demonstrations, unites the energy and forces of the proletariat, brings proletarian mass pressure upon the bourgeois State. The more general and conscious mass action becomes, the more it antagonizes the bourgeois State, the more it becomes political mass action. Mass action is responsive to life itself, the form of aggressive proletarian struggle under imperialism. Out of this struggle develops revolutionary mass action, the means for the proletarian conquest of power.

And further, on page 12 of the same document:

Strikes of protest develop into general political strikes and then into revolutionary mass action for the conquest of the power of the State. Mass action becomes political in purpose while extra-parliamentary in form; it is equally a process of revolution and the revolution itself in operation.

Then, on page 16:

The Communist Party shall participate in mass strikes, not only to achieve the immediate purposes of the strike, but to develop the revolutionary implications of the mass strike.

And then making the purpose still more clear, we have the following from page 30 of the manifesto of the Communist International, with

SERIES OF BULLETINS PUBLISHED BY THE BUREAU OF LABOR STATISTICS.

[The publication of the annual and special reports and of the bimonthly bulletin was discontinued in July, 1912, and since that time a bulletin has been published at irregular intervals. Each number contains matter devoted to one of a series of general subjects. These bulletins are numbered consecutively, beginning with No. 101, and up to No. 236; they also carry consecutive numbers under each series. Beginning with No. 237 the serial numbering has been discontinued. A list of the series is given below. Under each is grouped all the bulletins which contain material relating to the subject matter of that series. A list of the reports and bulletins of the Bureau issued prior to July 1, 1912, will be furnished on application. The bulletins marked thus * are out of print.]

Wholesale Prices.

- * Bul. 114. Wholesale prices, 1890 to 1912.
- Bul. 149. Wholesale prices, 1890 to 1913.
- * Bul. 173. Index numbers of wholesale prices in the United States and foreign countries.
- Bul. 181. Wholesale prices, 1890 to 1914.
- Bul. 200. Wholesale prices, 1890 to 1915.
- Bul. 226. Wholesale prices, 1890 to 1916.
- Bul. 269. Wholesale prices, 1890 to 1919. [In press.]

Retail Prices and Cost of Living.

- * Bul. 105. Retail prices, 1890 to 1911: Part I.
Retail prices, 1890 to 1911: Part II—General tables.
- * Bul. 106. Retail prices, 1890 to June, 1912: Part I.
Retail prices, 1890 to June, 1912: Part II—General tables.
- Bul. 108. Retail prices, 1890 to August, 1912.
- Bul. 110. Retail prices, 1890 to October, 1912.
- Bul. 113. Retail prices, 1890 to December, 1912.
- Bul. 115. Retail prices, 1890 to February, 1913.
- * Bul. 121. Sugar prices, from refiner to consumer.
- Bul. 125. Retail prices, 1890 to April, 1913.
- Bul. 130. Wheat and flour prices, from farmer to consumer.
- Bul. 132. Retail prices, 1890 to June, 1913.
- Bul. 136. Retail prices, 1890 to August, 1913.
- * Bul. 138. Retail prices, 1890 to October, 1913.
- Bul. 140. Retail prices, 1890 to December, 1913.
- Bul. 156. Retail prices, 1907 to December, 1914.
- Bul. 164. Butter prices, from producer to consumer.
- Bul. 170. Foreign food prices as affected by the war.
- * Bul. 184. Retail prices, 1907 to June, 1915.
- Bul. 197. Retail prices, 1907 to December, 1915.
- Bul. 228. Retail prices, 1907 to December, 1916.
- Bul. 266. A study of family expenditures in the District of Columbia. [In press.]
- Bul. 270. Retail prices, 1913 to 1919. [In press.]

Wages and Hours of Labor.

- Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
- Bul. 118. Ten-hour maximum working-day for women and young persons.
- Bul. 119. Working hours of women in the pea canneries of Wisconsin.
- * Bul. 128. Wages and hours of labor in the cotton, woolen, and silk industries, 1890 to 1912.
- * Bul. 129. Wages and hours of labor in the lumber, millwork, and furniture industries, 1890 to 1912.
- * Bul. 131. Union scale of wages and hours of labor, 1907 to 1912.
- * Bul. 134. Wages and hours of labor in the boot and shoe and hosiery and knit goods industries, 1890 to 1912.
- * Bul. 135. Wages and hours of labor in the cigar and clothing industries, 1911 and 1912.
- Bul. 137. Wages and hours of labor in the building and repairing of steam railroad cars, 1890 to 1912.
- Bul. 143. Union scale of wages and hours of labor, May 15, 1913.
- Bul. 146. Wages and regularity of employment and standardization of piece rates in the dress and waist industry of New York City.

Wages and Hours of Labor—Concluded.

- Bul. 147. Wages and regularity of employment in the cloak, suit, and skirt industry.
- Bul. 150. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1913.
- Bul. 151. Wages and hours of labor in the iron and steel industry in the United States, 1907 to 1912.
- Bul. 153. Wages and hours of labor in the lumber, millwork, and furniture industries, 1907 to 1913.
- Bul. 154. Wages and hours of labor in the boot and shoe and hosiery and underwear industries, 1907 to 1913.
- Bul. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories.
- Bul. 161. Wages and hours of labor in the clothing and cigar industries, 1911 to 1913.
- Bul. 163. Wages and hours of labor in the building and repairing of steam railroad cars, 1907 to 1913.
- Bul. 168. Wages and hours of labor in the iron and steel industry, 1907 to 1913.
- Bul. 171. Union scale of wages and hours of labor, May 1, 1914.
- Bul. 177. Wages and hours of labor in the hosiery and underwear industry, 1907 to 1914.
- Bul. 178. Wages and hours of labor in the boot and shoe industry, 1907 to 1914.
- Bul. 187. Wages and hours of labor in the men's clothing industry, 1911 to 1914.
- Bul. 190. Wages and hours of labor in the cotton, woolen, and silk industries, 1907 to 1914.
- Bul. 194. Union scale of wages and hours of labor, May 1, 1915.
- Bul. 204. Street railway employment in the United States.
- Bul. 214. Union scale of wages and hours of labor, May 15, 1916.
- Bul. 218. Wages and hours of labor in the iron and steel industry, 1907 to 1915.
- Bul. 221. Hours, fatigue, and health in British munition factories.
- Bul. 225. Wages and hours of labor in the lumber, millwork, and furniture industries, 1915.
- Bul. 232. Wages and hours of labor in the boot and shoe industry, 1907 to 1916.
- Bul. 238. Wages and hours of labor in woolen and worsted goods manufacturing, 1916.
- Bul. 239. Wages and hours of labor in cotton goods manufacturing and finishing, 1916.
- Bul. 245. Union scale of wages and hours of labor, May 15, 1917.
- Bul. 252. Wages and hours of labor in the slaughtering and meat-packing industry.
- Bul. 259. Union scale of wages and hours of labor, May 15, 1918.
- Bul. 260. Wages and hours of labor in the boot and shoe industry, 1907 to 1918.
- Bul. 261. Wages and hours of labor in woolen and worsted goods manufacturing, 1918.
- Bul. 262. Wages and hours of labor in cotton goods manufacturing and finishing, 1918.
- Bul. 265. Industrial survey in selected industries in the United States, 1919. Preliminary report. [In press.]
- Bul. 274. Union scale of wages and hours of labor, May 15, 1919. [In press.]

Employment and Unemployment.

- Bul. 109. Statistics of unemployment and the work of employment offices.
- Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
- Bul. 172. Unemployment in New York City, N. Y.
- Bul. 182. Unemployment among women in department and other retail stores of Boston, Mass.
- Bul. 183. Regularity of employment in the women's ready-to-wear garment industries.
- Bul. 192. Proceedings of the American Association of Public Employment Offices.
- Bul. 195. Unemployment in the United States.
- Bul. 196. Proceedings of the Employment Managers' Conference held at Minneapolis, January, 1916.
- Bul. 202. Proceedings of the conference of the Employment Managers' Association of Boston, Mass., held May 10, 1916.
- Bul. 206. The British system of labor exchanges.
- Bul. 220. Proceedings of the Fourth Annual Meeting of the American Association of Public Employment Offices, Buffalo, N. Y., July 20 and 21, 1916.
- Bul. 223. Employment of women and juveniles in Great Britain during the war.
- Bul. 227. Proceedings of the Employment Managers' Conference, Philadelphia, Pa., April 2 and 3, 1917.
- Bul. 235. Employment system of the Lake Carriers' Association.
- Bul. 241. Public employment offices in the United States.
- Bul. 247. Proceedings of the Employment Managers' Conference, Rochester, N. Y., May 9-11, 1918.

Women in Industry.

- Bul. 116. Hours, earnings, and duration of employment of wage-earning women in selected industries in the District of Columbia.
- * Bul. 117. Prohibition of night work of young persons.
- Bul. 118. Ten-hour maximum working-day for women and young persons.
- Bul. 119. Working hours of women in the pea canneries of Wisconsin.
- * Bul. 122. Employment of women in power laundries in Milwaukee.
- Bul. 160. Hours, earnings, and conditions of labor of women in Indiana mercantile establishments and garment factories.
- * Bul. 167. Minimum-wage legislation in the United States and foreign countries.
- Bul. 175. Summary of the report on condition of woman and child wage earners in the United States.
- Bul. 176. Effect of minimum-wage determination in Oregon.
- Bul. 180. The boot and shoe industry in Massachusetts as a vocation for women.
- Bul. 182. Unemployment among women in department and other retail stores of Boston, Mass.
- Bul. 193. Dressmaking as a trade for women in Massachusetts.
- Bul. 215. Industrial experience of trade-school girls in Massachusetts.
- Bul. 217. Effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children.
- Bul. 223. Employment of women and juveniles in Great Britain during the war.
- Bul. 253. Women in the lead industry.

Workmen's Insurance and Compensation (including laws relating thereto).

- Bul. 101. Care of tuberculous wage earners in Germany.
- Bul. 102. British National Insurance Act, 1911.
- Bul. 103. Sickness and accident insurance law of Switzerland.
- Bul. 107. Law relating to insurance of salaried employees in Germany.
- * Bul. 126. Workmen's compensation laws of the United States and foreign countries.
- Bul. 155. Compensation for accidents to employees of the United States.
- * Bul. 185. Compensation legislation of 1914 and 1915.
- Bul. 203. Workmen's compensation laws of the United States and foreign countries.
- Bul. 210. Proceedings of the Third Annual Meeting of the International Association of Industrial Accident Boards and Commissions.
- Bul. 212. Proceedings of the conference on social insurance called by the International Association of Industrial Accident Boards and Commissions.
- Bul. 217. Effect of workmen's compensation laws in diminishing the necessity of industrial employment of women and children.
- Bul. 240. Comparison of workmen's compensation laws of the United States.
- Bul. 243. Workmen's compensation legislation in the United States and foreign countries.
- Bul. 248. Proceedings of the Fourth Annual Meeting of the International Association of Industrial Accident Boards and Commissions.
- Bul. 264. Proceedings of the Fifth Annual Meeting of the International Association of Industrial Accident Boards and Commissions.
- Bul. 273. Proceedings of the Sixth Annual Meeting of the International Association of Industrial Accident Boards and Commissions. [In press.]
- Bul. 275. Comparison of workmen's compensation laws of the United States and Canada up to January 1, 1920. [In press.]

Industrial Accidents and Hygiene.

- Bul. 104. Lead poisoning in potteries, tile works, and porcelain enameled sanitary ware factories.
- Bul. 120. Hygiene of the painters' trade.
- * Bul. 127. Dangers to workers from dusts and fumes, and methods of protection.
- Bul. 141. Lead poisoning in the smelting and refining of lead.
- * Bul. 157. Industrial accident statistics.
- Bul. 165. Lead poisoning in the manufacture of storage batteries.
- * Bul. 179. Industrial poisons used in the rubber industry.
- Bul. 188. Report of British departmental committee on the danger in the use of lead in the painting of buildings.
- * Bul. 201. Report of committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. [Limited edition.]
- Bul. 205. Anthrax as an occupational disease.
- Bul. 207. Causes of death by occupation.
- * Bul. 209. Hygiene of the printing trades.
- Bul. 216. Accidents and accident prevention in machine building.
- * Bul. 219. Industrial poisons used or produced in the manufacture of explosives.
- Bul. 221. Hours, fatigue, and health in British munition factories.
- Bul. 230. Industrial efficiency and fatigue in British munition factories.
- Bul. 231. Mortality from respiratory diseases in dusty trades.

Industrial Accidents and Hygiene—Concluded.

- Bul. 234. Safety movement in the iron and steel industry, 1907 to 1917.
- Bul. 236. Effect of the air hammer on the hands of stonemasons.
- Bul. 251. Preventable death in the cotton manufacturing industry.
- Bul. 253. Women in the lead industry.
- Bul. 256. Accidents and accident prevention in machine building. (Revised.) [In press.]
- Bul. 267. Anthrax as an occupational disease. (Revised.) [In press.]

Conciliation and Arbitration (including strikes and lockouts).

- * Bul. 124. Conciliation and arbitration in the building trades of Greater New York.
- Bul. 133. Report of the industrial council of the British Board of Trade on its inquiry into industrial agreements.
- Bul. 139. Michigan copper district strike.
- Bul. 144. Industrial court of the cloak, suit, and skirt industry of New York City.
- Bul. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City.
- * Bul. 191. Collective bargaining in the anthracite coal industry.
- Bul. 198. Collective agreements in the men's clothing industry.
- Bul. 233. Operation of the Industrial Disputes Investigation Act of Canada.

Labor Laws of the United States (including decisions of courts relating to labor).

- * Bul. 111. Labor legislation of 1912.
- * Bul. 112. Decisions of courts and opinions affecting labor, 1912.
- * Bul. 148. Labor laws of the United States, with decisions of courts relating thereto.
- Bul. 152. Decisions of courts and opinions affecting labor, 1913.
- * Bul. 166. Labor legislation of 1914.
- * Bul. 169. Decisions of courts affecting labor, 1914.
- * Bul. 186. Labor legislation of 1915.
- * Bul. 189. Decisions of courts affecting labor, 1915.
- Bul. 211. Labor laws and their administration in the Pacific States.
- * Bul. 213. Labor legislation of 1916.
- Bul. 224. Decisions of courts affecting labor, 1916.
- Bul. 229. Wage-payment legislation in the United States.
- Bul. 244. Labor legislation of 1917.
- Bul. 246. Decisions of courts affecting labor, 1917.
- Bul. 257. Labor legislation of 1918.
- Bul. 258. Decisions of courts and opinions affecting labor, 1918. [In press.]

Foreign Labor Laws.

- Bul. 142. Administration of labor laws and factory inspection in certain European countries.

Vocational Education.

- Bul. 145. Conciliation, arbitration, and sanitation in the dress and waist industry of New York City.
- Bul. 147. Wages and regularity of employment in the cloak, suit, and skirt industry.
- * Bul. 159. Short-unit courses for wage earners, and a factory school experiment.
- Bul. 162. Vocational education survey of Richmond, Va.
- Bul. 199. Vocational education survey of Minneapolis.
- Bul. 271. Adult working-class education in Great Britain and the United States.

Labor as Affected by the War.

- Bul. 170. Foreign food prices as affected by the war.
- * Bul. 219. Industrial poisons used or produced in the manufacture of explosives.
- Bul. 221. Hours, fatigue, and health in British munition factories.
- Bul. 222. Welfare work in British munition factories.
- Bul. 223. Employment of women and juveniles in Great Britain during the war.
- Bul. 230. Industrial efficiency and fatigue in British munition factories.
- Bul. 237. Industrial unrest in Great Britain.
- Bul. 249. Industrial health and efficiency. Final report of British Health of Munition Workers Committee.
- Bul. 255. Joint industrial councils in Great Britain.

Miscellaneous Series.

- * Bul. 117. Prohibition of night work of young persons.
- Bul. 118. Ten-hour maximum working day for women and young persons.
- * Bul. 123. Employers' welfare work.
- Bul. 158. Government aid to home owning and housing of working people in foreign countries.
- * Bul. 159. Short-unit courses for wage earners, and a factory school experiment.
- * Bul. 167. Minimum-wage legislation in the United States and foreign countries.
- Bul. 170. Foreign food prices as affected by the war.
- Bul. 174. Subject index of the publications of the United States Bureau of Labor Statistics up to May 1, 1915.
- Bul. 208. Profit sharing in the United States.
- Bul. 222. Welfare work in British munition factories.
- Bul. 242. Food situation in Central Europe, 1917.
- Bul. 250. Welfare work for employees in industrial establishments in the United States.
- Bul. 254. International labor legislation and the society of nations.
- Bul. 263. Housing by employers in the United States. [In press.]
- Bul. 268. Historical survey of international action affecting labor. [In press.]
- Bul. 272. Proceedings of sixth annual conference of Government labor officials. [In press.]

SPECIAL PUBLICATIONS ISSUED BY THE BUREAU OF LABOR STATISTICS.

Descriptions of occupations, prepared for the United States Employment Service, 1918-19.

Boots and shoes, harness and saddlery, and tanning.

Cane-sugar refining and flour milling.

Coal and water gas, paint and varnish, paper, printing trades, and rubber goods.

Electrical manufacturing, distribution, and maintenance.

Logging camps and sawmills.

Medicinal manufacturing.

Metal working, building and general construction, railroad transportation, and ship-building.

Mines and mining.

Office employees.

Slaughtering and meat packing.

Street railways.

Textiles and clothing.

Water transportation.



which the Communist Party of America is affiliated and whose manifesto is accepted as part of the policy of the party:

The revolutionary era compels the proletariat to make use of the means of battle which will concentrate its entire energies, namely, mass action, with its logical resultant, direct conflict with the governmental machinery in open combat. All other methods, such as revolutionary use of bourgeois parliamentarism, will be of only secondary significance.

From these quotations and numerous other statements in the manifesto, not here quoted, it is apparent that the Communist Party of America is not merely a political party seeking the control of affairs of State, but a revolutionary party seeking to conquer and destroy the State in open combat. And the only conclusion is that the Communist Party of America is an organization that believes in, teaches, and advocates the overthrow by force or violence of the Government of the United States.

It does not devolve upon the Secretary of Labor officially to determine whether Congress was wise in creating the law, or the Communist Party wise in creating the facts. It is his duty to apply the law to the facts as he finds them. It is mandatory upon him to take into custody aliens who are members of this organization and deport them in the manner provided for in the immigration act of February 5, 1917.

Your¹ memorandum of January 17, 1920, recommending that the Department issue its warrant for the deportation of Englebrert Preis, such deportation to be to Austria, at Government expense, is hereby approved.

¹ Refers to the Commissioner General of Immigration.

BOOK REVIEWS.

FISHER, IRVING. *Stabilizing the dollar. A plan to stabilize the general price level without fixing individual prices.* New York, The Macmillan Co., 1920. 324 pp.

This book is a most valuable contribution to the discussion of prices. The author presents the facts as to price fluctuations, discusses the causes of changing commodity prices and price levels, points out the evils resulting from unstable prices, and presents his remedy for fluctuating prices and the evils growing therefrom.

The facts as to changing prices of individual commodities and all commodities taken collectively are determined now with great accuracy by means of index numbers. The author mentions all important index numbers in use at present and pays the United States Bureau of Labor Statistics the compliment of citing its index numbers as the best now being published. By means of index numbers it is clearly demonstrable that price levels all over the world have been steadily rising since 1897.

In chapter 2 the author discusses the causes of fluctuating price levels in different countries, and after a careful examination of all the available evidence reaches the conclusion that the chief cause operating to change price levels is the instability in the value of the money unit. By plotting the price curves of several different commodities in terms of commodities in general, he determines that Brussels carpets and eggs are much more stable in value than gold, which is the measure of prices in all the important industrial and commercial countries of the world to-day. Of course, the author does not take account of the violent seasonal fluctuations in the prices of eggs. As a matter of fact, eggs would make a very much worse measure of prices than gold. On the other hand, if the world had used Brussels carpets as the basis of its monetary and banking systems, price fluctuations would have been less violent than they have been during the period from 1890 to the present time.

In chapter 3 the author points out the evils resulting from fluctuating price levels. He shows that increasing prices do not mean general impoverishment but do mean the impoverishment of some and the enrichment of others. Contracts, although guaranteed inviolability in the Constitution of the United States, are violated and upset every year because of changes in the value of money, the medium through which settlements are made. Lowered real wages, because of increased prices of the necessities of life, lead to industrial unrest and the advocacy of violent measures to remedy this condition. The falling prices which culminated in the panic of 1893 and the following depression continuing until 1897 produced perhaps an equal amount of discontent, but in different quarters and for different reasons. The discontent of the 1880's and 1890's was principally a farmer's discontent against the holders of mortgages on his farm and the "bloated bondholders." The discontent to-day is leveled chiefly at the profiteers who are accused of being responsible for high prices. As a matter of fact, the profiteer is a result rather than a cause of high prices. He has been able to make large profits because prices have risen so sharply and continuously.

Chapter 4 summarizes briefly some of the remedies that have been proposed to cope with the high and ever-rising prices of the present. These proposed remedies range from parcels post to Government ownership and from housekeepers' market clubs to the single tax. The author then points out that the dollar is the only unit as yet unstandardized. The dollar is supposed to be a standard of value. In reality, however, it is merely a standard of weight. Prof. Fisher then presents his well-known plan for converting our present monetary unit from a fixed weight of gold of fluctuating value to a standard of fixed value of fluctuating weight. Briefly, the plan is to

retire from circulation all gold coins and to issue for circulation gold certificates. If the prices of commodities collectively increase, as shown by the official index number, the weight of gold represented by each gold certificate in circulation is increased accordingly so that the prices are speedily brought down to approximately their former level. If, on the other hand, the prices of commodities in general should fall, the gold content of the uncoined gold dollars is decreased proportionately and automatically, thus bringing prices up again to approximately their former level. The technical details of the plan are given in Appendix I. Appendix II gives the objections that have been raised to the plan. Appendix III presents some alternative plans that have been suggested.

An excellent bibliography of the more important index numbers now extant and the principal writings on index numbers is given in Appendix VI.

The book is admirably arranged for ready reference or for use as a text book in college classes. A short table of contents is given followed by an analytical table of contents which gives all the more important points discussed in the volume. At the beginning a general summary is presented followed by a more detailed summary by sections. The man who is pressed for time can get a very accurate understanding of the arguments and conclusions by reading the 20 pages of this summary by sections.

PUBLICATIONS RELATING TO LABOR.

Official—United States.

ALABAMA.—*State Mine Inspectors. Annual report of coal mines, 1918. Birmingham, 1919. 87 pp.*

The coal production in 1918 was 19,521,840 short tons, a decrease of 891,971 tons as compared with 1917. The coke tonnage was 4,344,726 short tons, a decrease of 523,872 tons compared with 1917. In 1918, 26,341 men were employed in and around the mines as against 27,921 in 1917, the decrease representing approximately the industry's contribution to the Army. The coal produced per employee in 1918 was 741 tons as compared with 731 tons in 1917. There were 110 fatalities against 108 in 1917. During the year 932 regular inspections and 146 visits to investigate fatal and nonfatal accidents were made.

DISTRICT OF COLUMBIA.—*Minimum Wage Board. Wages of women in hotels and restaurants in the District of Columbia. [Washington, October 10, 1919.] 23 pp. Bulletin No. 3.*

For an account of the conference which resulted in recommendation of a minimum wage for women employed in hotels and restaurants see pages 131 to 136 of this issue of the MONTHLY LABOR REVIEW.

ILLINOIS.—*Department of Mines and Minerals. Thirty-seventh annual coal report, 1918. Springfield, 1918. 306 pp. Illustrated.*

Compared with 1917 the report shows an increased production of 10,995,942 tons, an increase of 157 in the number of mines, an increase of four days in working time, and an increase of 10,479 employees. The total number of fatalities was 259, an increase of 52, or more than 25 per cent. A loss of 30 or more days resulted from the injury of each of 2,161 workers—an increase of 527, or 32.25 per cent over the preceding year. Falling roof and sides were responsible for 100 deaths and 713 serious injuries, and pit cars for 46 fatal and 516 nonfatal injuries.

INDIANA.—*Employment Commission. Some explanations concerning junior section, Indiana free employment service. Suggested phases of vocational guidance for minors. Indianapolis, August 1, 1919. 16 pp. Bulletin No. 1.*

KANSAS.—*Court of Industrial Relations. An act creating the Court of Industrial Relations, defining its powers and duties. Topeka, 1920. 14 pp.*

This act is discussed in an article on pages 214 to 217 of this issue of the MONTHLY LABOR REVIEW.

LOUISIANA.—*Department of Education. Plan for vocational education (prepared 1919). Approved by the Federal Board for Vocational Education. Baton Rouge, 1919. 40 pp.*

The plan includes agricultural, trade and industrial, and home economics education, and teacher training.

MARYLAND.—*State Department of Education. Vocational education in Maryland, 1919. Baltimore, 1919. 63 pp.*

MASSACHUSETTS.—*Bureau of Statistics. Forty-seventh quarterly report on employment in Massachusetts, quarter ending September 30, 1919. Boston, 1919. 21 pp.*

According to returns received from 1,184 labor organizations in Massachusetts, representing an aggregate membership of 257,390, the number of members unemployed for all causes at the close of September, 1919, was 13,863, or 5.4 per cent of the total number. This percentage is slightly higher than the corresponding percentage (5.1) for the close of the preceding quarter, but is lower than the corresponding percentage for the close of September in each year of the past decade except 1912 and 1916. The

number of strikes reported as having occurred during the quarter was 188 as compared with 161 during the preceding quarter.

NEW YORK.—*Department of Health. The public health manual, containing the public health law, the sanitary code and the provisions in other general laws relating to public health. Albany, February 1, 1919. 658 pp.*

Includes the text of the labor laws relating to the reporting of industrial poisons, employment of minors, physical examination of children in factories, powers and duties of boards of health relative to tenement-made articles, lunch rooms, and the employment of women and children in basements.

—*Industrial Commission. Health hazards of the chemical industry. Albany, November, 1919. 69 pp. Illustrated. Special bulletin No. 96.*

This report is noted more fully on pages 165 to 168 of this issue of the REVIEW.

—*Reconstruction Commission. Report to Gov. Alfred E. Smith on retrenchment and reorganization in the State Government. Albany, October 10, 1919. 419 pp. Charts.*

This is the full report of the commission.

A digest of the summary of the report was published in the January, 1920, issue of the MONTHLY LABOR REVIEW, pages 266 to 269.

PANAMA CANAL.—*Washington Office. Manual of information concerning employments for the Panama Canal Service, revised November 15, 1919. Washington, 1919. 35 pp. Form 151.*

PENNSYLVANIA.—*Department of Mines. Report. 1917. Part II.—Bituminous. Harrisburg, 1919. 1470 pp. Chart.*

The output of the coal mines of the State in 1917 reached the unprecedented total of 271,519,710 net tons, of which 171,074,411 tons were bituminous and 100,445,299 anthracite. Coke production was 23,240,777 tons. There were 342,734 men employed in and about the mines. The number of fatalities among workers was 1,075, compared with 1,030 to a total of 246,797,774 tons produced in 1915 and 1,001 to a total production of 256,804,012 net tons in 1916.

SOUTH DAKOTA.—*State Inspector of Mines. Twenty-seventh, twenty-eighth, and twenty-ninth annual reports, 1916, 1917, 1918. Pierre, 1917-19. 32, 36, 38 pp.*

The reports for 1917 and 1918 show a decrease in the activity of the mining industry, owing to shortage of labor and increased cost of production, the inactivity being most marked in 1918, when materials and supplies necessary for the recovery of gold had increased in cost, in some instances, as much as 100 per cent. The report for that year states, however, that "conditions are returning to normal with respect to labor, and this coming year will see all plants operating at full capacity."

Fatal accidents reported are 6 in 1916, 7 in 1917, 1 in 1918; permanently and totally disabled, 1 each in 1916 and 1917; permanently and partially disabled, 3 in 1916, 11 in 1917, and 2 in 1918; seriously injured (more than 14 days lost time), 105 in 1916, 114 in 1917, and 102 in 1918; slightly injured (1 to 14 days lost time), 683 in 1916, 590 in 1917, and 429 in 1918.

VIRGINIA.—*State Board of Education. Vocational agriculture in the secondary schools of Virginia. Richmond, January, 1920. 71 pp.*

WASHINGTON.—*State Mine Inspector. Annual reports of coal mines for the years ending December 31, 1916, 1917, 1918. Seattle, 1917, 1918, 1919. 121, 53, 62 pp.*

The coal production for 1918 was 4,128,424 short tons, which was an increase of 125,665 tons over the previous year and the largest production the State has yet had. There were 5,847 persons employed in and about the coal mines of the State, of whom 4,172 worked inside and 1,675 outside the mines. This was an increase of 502 employees over 1917. There were 34 fatal accidents and 692 nonfatal accidents.

WEST VIRGINIA.—*Department of Mines. Annual report for the fiscal year ending June 30, 1917. Charleston, 1917. 376 pp.*

During the year 88,665 persons were employed at the mines and coke ovens, an increase of 8,607 over the previous year. The average annual earnings of pick miners

was \$1,137.81, an increase of \$254.33 over 1916, while the rate per ton of run-of-mine coal mined was 69 cents as against 52 cents in 1916. The report tabulates 394 fatal and 993 nonfatal accidents.

WISCONSIN.—*State Board of Vocational Education. Courses of study. Teacher training. Madison, 1919. 16 pp. Monograph No. 5.*

UNITED STATES.—*Department of Labor. National War Labor Board. Report of the secretary for the 12 months ending May 31, 1919. Washington, 1920. 149 pp.*

Practically the entire text of the report of the secretary was published in the MONTHLY LABOR REVIEW for August, 1919 (pp. 262-270). This volume, however, includes detailed reports of the heads of the various departments of the board, including the department of procedure, the department of files and information, the department of examination, and the department of administration of awards. Appendix 1 is a special report on public utility cases, many of which were noted in the REVIEW from time to time as the awards were made. These awards are classified in this report under the following heads: Right to organize; Collective bargaining; Representation of workers; Equal pay for equal work; Women as conductors; Hours of labor; and Individual contracts. In Appendix 2 is presented an analysis of all of the decisions of the board up to May 31, 1919, which it is believed will be very useful to all students of industrial conditions. In this analysis the decisions of the board are classified under the general heads: No strikes or lockouts during the war; Right to organize; Existing conditions; Women in industry; Hours of labor; Maximum production; Mobilization of labor; Custom of localities; and The living wage. The principles and rules of procedure of the board are set forth in full in Appendix 3. Appendix 4 gives an account of the organization and practice of the board as adopted and amended to December 10, 1918.

— *Woman in Industry Service. First annual report of the Director of the Woman in Industry Service, for the fiscal year ended June 30, 1919. Washington, 1919. 29 pp.*

This service was organized in July, 1918, a year and three months after the entrance of the United States into the war, and the appointment of its director and assistant director announced July 9, 1918.

Briefly stated the purpose of this service is—

1. To consider all general policies with respect to women in industry and to advise the Secretary of Labor as to the policies which should be pursued.
2. To keep informed of the work of the several divisions of the department in so far as they relate to women in industry and to advise with the divisions on all such work.
3. To secure information on all matters relating to women in industry and to collate such information into useful form.
4. To establish useful connections with all governmental departments and divisions on this subject and with voluntary agencies and societies.

— *Department of the Interior. Bureau of Mines. Miners' safety and health almanac for 1920. Published in cooperation with the United States Public Health Service. Washington, 1919. 51 pp. Illustrated. Miners' circular 26.*

The second of a series, the first of which, for the year 1919, was issued as Miners' circular 24. This almanac contains "information on different diseases that cause much sickness and death among miners and their families, and points out how such diseases can be kept from starting and spreading. Also, it describes some of the more common causes of accidents in mines and shows how the miner can lessen the risks of his work."

— *Employees' Compensation Commission. Regulations concerning duties of employees, official superiors, medical officers, and others under Federal Compensation Act of September 7, 1916. Revised October 15, 1919. Washington, 1919. 75 pp.*

— *Federal Board for Vocational Education. Rehabilitation Division. A year's work in vocational rehabilitation in the twelfth district comprising California, Arizona, and Nevada. San Francisco, Flood Bldg., 1919. 29 pp.*

— *Government Printing Office. Superintendent of Documents. Immigration, naturalization, citizenship, Chinese, Japanese, Negroes, enlistment of aliens. List of publications. Washington, 1919. 16 pp. Price list 67, 3d edition.*

UNITED STATES.—*Interstate Commerce Commission. Collisions, derailments, and other accidents resulting in injury to persons, equipment or roadbed arising from the operation of railways used in interstate commerce. October, November, and December, and year 1918. Washington, 1920. 64 pp. Accident bulletin No. 70.*

A brief statement of the accidents which occurred in the year 1918 is contained on pages 159 and 160 of this issue of the REVIEW.

— *Railroad Administration. Agreement between the Railroad Administration and the employees represented by the Railway Employees' Department of the American Federation of Labor, and its affiliated organizations of the mechanical section and divisions Nos. 1, 2, and 3 thereof. Washington, 1919. 77 pp.*

The affiliated divisions to which this agreement is applicable are the International Association of Machinists, International Brotherhood of Boilermakers, Iron Ship Builders and Helpers of America, International Brotherhood of Blacksmiths and Helpers, Amalgamated Sheet Metal Workers' International Alliance, International Brotherhood of Electrical Workers, and Brotherhood of Railway Carmen of America. The agreement, which is dated September 20, 1919, covers hours of service, overtime work, preferences in reduction of forces, grievances, apprentices, rates of pay, shop conditions, personal injuries, and assignment of work. Eight hours is made the basic work day, while the rates of pay are increased an average of 4 cents an hour, except for mechanics in the car department, who were receiving 58 cents an hour and who received an increase of 9 cents, the increases to be effective from May 1, 1919. Special rules are laid down for each of the affiliated divisions, the subjects covered including qualifications, classification of work, apprentices and helpers, running repair work, and differentials.

— *General order No. 27, with its supplements, addenda, amendments and interpretations to June 30, 1919. Wages of railroad employees. Washington, 1919. 212 pp.*

General order No. 27 was printed in full in the June, 1918, issue of the MONTHLY LABOR REVIEW, pages 1-21.

— *Safety section circular No. 7. Aims and purposes of the safety section. Address delivered by A. F. Duffy before the steam railroad section of the National Safety Congress, Cleveland, Ohio, October 2, 1919. Washington, 1919. 7 pp.*

— *Treasury Department. Public Health Service. Annual report of the surgeon general for the fiscal year 1919. Washington, 1919. 346 pp.*

Included in this report is an account of the organization of a division of industrial hygiene in cooperation with the Working Conditions Service of the Department of Labor, and a brief statement of certain investigations conducted by this division the results of which have, in several instances, been made public. One of these was the investigation of electro-chemical and abrasive plants at Niagara Falls, carried on in cooperation with the Woman in Industry Service of the Department of Labor, an account of which is given on pages 161 to 168 of this issue of the REVIEW. Another investigation was that conducted in conjunction with the Children's Bureau for the purpose of establishing standards of height and weight for Southern mill children. To determine the extent of the lead hazard in the pottery industry, an investigation was made of 116 potteries, chiefly in New Jersey, and physical examinations were made of over 1,700 men. The report also mentions investigations made in a number of plants at the request of the United States Employees' Compensation Commission that the service assume advisory and in some instances direct charge of the medical relief in plants whose employees were judged to come under the Federal compensation law.

— *War Department. Surgeon General's Office. Defects found in drafted men. Statistical information compiled from the draft records showing the physical condition of the men registered and examined in pursuance of the requirements of the selective service act. Prepared under the direction of the Surgeon General, by Albert G. Love. Washington, 1919. 359 pp. 66th Congress, 1st session.*

Official—Foreign Countries.

ARGENTINA.—*Departamento Nacional del Trabajo. Trabajo a Domicilio. Industria de la Ropería Salarios Mínimos. Buenos Aires, 1919. 19 pp. (Ley Num. 10,505.)*

Report of the president of the commission on minimum wages in home work in the clothing industry concerning piece wages on various articles of clothing.

CANADA.—*Bureau of Statistics. The Canadian Year Book, 1918. Ottawa, 1919. 686 pp. Map.*

— *Parliament. House of Commons. Cost of living. Proceedings of the special committee appointed for the purpose of inquiring forthwith as to the prices charged for foodstuffs, clothing, fuel, and other necessities of life, and as to the rates of profit made thereon by dealers and others concerned in their production, distribution, and sale, etc. Comprising the evidence taken and papers submitted in connection therewith. Nos. 1 to 23. Ottawa, 1919. 1008 pp. Parliamentary session, 1919.*

The conclusions of this investigation were published in an article in the September, 1919, issue of the MONTHLY LABOR REVIEW, pages 113–118.

GREAT BRITAIN.—*Home Office. Mines and quarries. General report, with statistics, for 1918, by the chief inspector of mines. Part II.—Labor. London, 1919. Pp. 91–142. Cmd. 490. Price, 6d. net.*

The total number of persons ordinarily employed at mines and at the quarries under the Quarries Act in the United Kingdom and the Isle of Man during 1918 was 1,072,903 (1,029,688 at mines and 43,215 at quarries), or a net decrease of 12,568 persons as compared with the preceding year—a decrease of 12,152 at mines and 416 at quarries. Of those employed at mines, 807,086 worked underground, and 222,602 above ground. Of the latter 11,761 were females. There were 1,284 separate fatal accidents in and about mines and quarries, causing the loss of 1,487 lives, an increase of 36 fatalities as compared with the previous year. Of these accidents 1,220, causing the loss of 1,420 lives, happened at mines, and 64, causing the loss of 67 lives, happened at quarries; or, expressed in terms of the number of persons employed, the death rate from accidents per 1,000 persons at all mines was 1.379 for surface and underground workers, and 1.603 for underground workers alone for 1918 as compared with 1.339 for surface and underground workers and 1.500 for underground workers alone for 1917. The death rate per million of tons raised at mines under the coal mines act during 1918 was 5.86, as compared with the average of 5.08 for the decennial period 1908–17.

— *Local Government Board. Forty-eighth annual report, 1918–1919. Part I.—Public health; Local administration; Local taxation and valuation. Part II.—Housing and town planning. Part III.—Administration of the poor law; Old age pensions. Part IV.—Special work arising out of the war. London, 1919. 197 pp. Cmd. 413. Price, 1s. net.*

— *Ministry of Health. Housing. New methods of construction. London, 1919. 4 pp. Cmd. 426. Price, 1d. net.*

Statement of proposals submitted to the Ministry of Health for the provision of houses of new methods of construction which the ministry has approved.

— *Housing, Town Planning, etc., Act, 1919; regulations. October 6, 1919. London, 1919. 24 pp.*

— *Ministry of Labor. Joint Industrial Council. A review of progress and achievements, December, 1919. [London], 1919. 20 pp. Bulletin No. 2.*

Gives a list of 51 Whitley councils set up between January 11, 1918, and October 21, 1919, with a summary of progress, since July, 1919, showing what the various councils have achieved as regards wages, hours, and holidays; disputes and conciliation; employment of disabled men; welfare; safety; and research, organization, statistics, etc. Progress in the organization of district councils and works committees is also noted.

GREAT BRITAIN.—*Ministry of Labor. National Insurance (Unemployment) Bill, 1919. Memorandum on the financial clauses. London, 1919. 3 pp. Cmd. 440. Price, 1d. net.*

Explains financial readjustments necessary if benefit payable to workpeople insured under the national insurance (unemployment) acts, 1911–1918, is increased from 7s. to 11s. per week, as is proposed in the bill.

— — — *Report by the Government actuary. London, 1919. Cmd. 439. 3 pp. Price, 1d. net.*

States that "owing to the lack of suitable data at the time the original calculation was made, the risk to be undertaken was overvalued, and the benefit fixed at a substantially lower rate than the contribution would have borne." It is recommended that the benefit be increased from 7s. (par value of shilling, 24.3 cents) to 11s. a week.

— *Ministry of Reconstruction. Adult Education Committee. Final report. London, 1919. 409 pp. Cmd. 321. 5 appendices.*

The final report of the Adult Education Committee is the fourth of a series of reports put out by this committee upon the subject of adult education. The first of these dealt with Industrial and Social Conditions in Relation to Adult Education; the second, with Education in the Army; while the third considered the question of Libraries and Museums.

From the nature of the material considered the final report may be divided into three parts. In the first part the past history of the movement for adult education is traced and its present status discussed. The second part deals with the demand for adult education and the intellectual standards achieved in the work which is being done. The third part is devoted to a discussion of the weaknesses and possibilities of adult education; the place of adult education in the work of universities; and the very apparent need of greater cooperation on the part of the universities in affording to workers opportunity for courses of study which will lift them above their daily routine and prepare them for a more intelligent participation in the duties of citizenship; the supply of teachers, with proposals for increasing it; methods of financing adult education classes; technical education in its relation to modern industry; and a generous number of conclusions and recommendations.

— *Oversea Settlement Committee. Report to the president of the committee of the delegates appointed to inquire as to openings in Canada for women from the United Kingdom. April–September, 1919. London, 1919. 35 pp. Cmd. 403. Price, 4d. net.*

This report is a result of a personal investigation by the committee in Canada over a period of four months. The purpose of the inquiry was to determine the opportunities of employment for women from Great Britain in industrial, commercial, and other kinds of employment and in land settlement and in positions as domestics. The social conditions the women would meet, as well as wages and housing conditions, form part of the study. The appendixes contain the list of authorities consulted during the study, suggestions as to the establishment of community houses for the benefit of girls coming over as servants, opportunities provided for special training in domestic service, and accounts of the experiences of individual women who have settled on farms.

ITALY.—*Ufficio Centrale di Statistica. Le fluttuazioni stagionali nella vita economica italiana, by Riccardo Bachi. 261 pp. Annali di Statistica, series V, vol. 9. Rome, 1919.*

A volume of the statistical annals published by the Italian Central Statistical Office, containing a study by Prof. Riccardo Bachi on the seasonal fluctuations in the economic life of Italy. The aspects of economic life covered by the study include internal and foreign commerce, prices, money in circulation, discount rates, the money market, credit movement, industrial activity, labor market, transportation, municipal administration, pawnshops, and State finances.

MEXICO.—*Secretaría de Industria, Comercio y Trabajo. Plan de estudios de la escuela superior de comercio y administración. Mexico, 1919. 131 pp.*

Regulations, requirements, and courses of study adopted for the reorganization of the superior school of commerce and administration.

NETHERLANDS.—*Centraal Bureau voor de Statistiek. Beknopt overzicht van den omvang der vakbeweging op Januari 1917. The Hague, 1917. 34, xvii pp. Bijdragen, new series, No. 245.*

The following table, taken from the report, sets forth the growth of trade-union membership in the Netherlands, 1913 to 1917. The figures for 1918 and 1919 were taken from *Maandschrift van het Centraal Bureau voor de Statistiek*, August, 1919 (p. 959).

TRADE-UNION MEMBERSHIP IN THE NETHERLANDS, 1913-1919.

Name of organization.	1913	1914	1915	1916	1917	1918	1919
National Labor Secretariat.....	8,097	9,697	9,242	10,510	14,309	23,068	33,626
National Federation of Trade Unions..	61,447	84,261	87,598	99,511	128,918	159,449	191,138
Evangelical Federation of Trade Unions.....	7,944	11,023	12,327	15,013	20,506	28,008	46,338
Roman Catholic Federation of Trade Unions.....	21,096	29,048	35,257	40,338	54,855	69,139	91,814
Nonpartisan Federation of Trade Unions.....	2,844	3,864	4,677	5,046	5,635	7,794	10,539
Total.....	101,428	137,893	149,101	170,418	224,223	287,458	373,455

— — — *Overzicht betreffende de loonen en den arbeidsduur bij werken ten behoeve van het Rijk bij aanbesteding uitgevoerd in 1913. The Hague, 1917. xxix, 24 pp. Bijdragen, new series, No. 238.*

Presents a summary view of wages and hours of labor on public works (State and municipal) executed by contract in the Netherlands during 1913. Previous studies have covered the years 1894, 1899, 1902, 1903, 1905, and 1908.

— — — *Statistiek van de loonen en den arbeidsduur der volgens de Ongevallenwet 1901 verzekerde werklieden in de papier industrie, in 1911. The Hague, 1917. xv [2], 10 pp. Bijdragen, new series, No. 242.*

This report is a survey of the paper-making industry in the Netherlands and presents comprehensive data as to wages and hours of labor of persons employed in the industry as of 1911.

— — — *Werkstakingen en uitsluitingen in Nederland gedurende, 1915-1916. The Hague, 1917-18. 2 vols. Bijdragen, new series, Nos. 239, 250.*

The following table, contained in a French summary in the text, gives in brief form the official reported data respecting strikes and lockouts in the Netherlands since 1910:

Year.	Number of strikes.	Number of lockouts.	Number of persons affected.	
			Strikes.	Lockouts.
1910.....	1 133 (131)	13	4,507	8,731
1911.....	1 205 (197)	12	19,122	883
1912.....	1 265 (260)	18	19,620	2,052
1913.....	1 400 (383)	27	23,990	6,171
1914.....	1 250 (241)	21	13,953	1,706
1915.....	1 259 (244)	10	14,373	806
1916.....	1 356 (345)	21	17,146	2 981

¹ Number of strikes for which number of strikers was reported.

² Applies to only 20 lockouts, number affected not being reported in the case of one lockout.

NETHERLANDS.—*Departement van Arbeid. Arbeidsvoorwaarden van het personeel op handelskantoren. The Hague, 1919. 56 pp. Uitgaven, No. 24.*

A study by the department of labor of hours, wages, and working conditions of store, office, and petty shop employees, covering 3,035 shops in which 23,427 were employed. Classified wages, per month, of 10,956 workers in August, 1914, are reported, as follows:

NUMBER AND PER CENT RECEIVING CLASSIFIED AMOUNT OF WAGES PER MONTH,
AUGUST, 1914, BY SEX.

[Par value of florin=40.2 cents.]

Classified monthly wage.	Male.		Female.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Less than 5 florins.....	31	0.34	5	0.26	36	0.33
5 to 9 florins.....	550	6.09	54	2.82	604	5.51
10 to 14 florins.....	782	8.65	133	6.93	915	8.35
15 to 19 florins.....	584	6.46	159	8.29	743	6.78
20 to 24 florins.....	518	5.73	252	13.14	770	7.03
25 to 29 florins.....	485	5.37	267	13.92	752	6.86
30 to 34 florins.....	352	3.89	146	7.61	498	4.55
35 to 39 florins.....	403	4.46	166	8.65	569	5.19
40 to 44 florins.....	370	4.09	162	8.45	532	4.86
45 to 49 florins.....	289	3.20	141	7.35	430	3.92
50 to 59 florins.....	513	5.67	206	10.74	719	6.56
60 to 69 florins.....	526	5.82	93	4.85	619	5.65
70 to 79 florins.....	559	6.18	56	2.92	615	5.61
80 to 89 florins.....	557	6.16	29	1.51	586	5.35
90 to 99 florins.....	316	3.50	15	.78	331	3.02
100 to 199 florins.....	1,698	18.79	34	1.77	1,732	15.81
200 florins and over.....	505	5.59			505	4.61
Total.....	9,038	100.0	1,918	100.0	10,956	100.0

SWEDEN.—*Socialstyrelsen. Levnadskostnaderna i Sverige 1913-14. Del III, Hushållsräkenskaper. Stockholm, 1919. 493 pp. Sveriges Officiella Statistik, Socialstatistik.*

Comprises part 3 of an extensive study of household budgets in Sweden in 1913-14. This volume contains a detailed statement of the sources of income and expenditures for various items of expenditure for each of the 908 families included in the investigation. These families were distributed throughout the 8 principal cities in the country, excluding Stockholm.

SWITZERLAND.—*Bureau Fédéral des Assurances. Rapport sur les entreprises privées en matière d'assurances en Suisse en 1917. Bern, 1919. 107* 193 pp.*

This volume is the annual report of the Swiss insurance bureau for the year 1917.

Unofficial.

ALLEN, FREDERICK J. *Advertising as a vocation. New York, The Macmillan Co., 1919. 178 pp.*

AMERICAN FEDERATION OF LABOR. *Arizona Branch. Proceedings of the eighth annual convention, held at Phoenix, Oct. 27-Nov. 1, 1919. Phoenix, 1919. 71 pp.*

— *Utah Branch. Proceedings of the fifteenth convention, held at Salt Lake City, September 9 to 12, 1919. Salt Lake City, 1919. 48 pp.*

AMERICAN WRITING PAPER CO. *Cost of living in Holyoke, Mass., July, 1919. An investigation made by John W. Scoville. Holyoke, 1919. 12 pp. 4 charts.*

Shows changes in the cost of the principal items of the family budget in Holyoke since 1913. The change in the cost of food was calculated from quotations of retail prices charged on January 1 of each year since 1913 furnished by local grocers, and

from advertised quotations in 1913 and 1919. In order "to get a composite food cost" the cost in 1913 and July, 1919, of specified amounts of each of 13 articles of food were calculated, and the results showed that the total cost had risen from \$54.97 in 1913 to \$102.88 in 1919, an increase of over 87 per cent. Figures for rents were based on those paid in 30 apartments in sections of the city where employees of the company live; it was found that rents had increased about 9 per cent. Fuel and light increased about 27 per cent. To obtain the increases in clothing and sundries the wholesale price index numbers of the United States Bureau of Labor Statistics were used; these items had increased 107 and 91 per cent, respectively.

Weighting the items according to their relative importance in the family budget, the company found that the increases since 1913 were as follows:

	Per cent.
Food.....	37.4
Rent.....	1.6
Fuel and light.....	1.4
Clothing.....	13.9
Sundries.....	18.2
All items.....	72.5

The company relates these figures to the changes in hourly wage rates paid to its employees. No figures are given as to wage rates but a chart is shown indicating changes in both wages and cost of living. The report states:

Since July, 1918, hourly wage rates have advanced more than the cost of living. The purchasing power in goods of an hour's labor was about 15 per cent higher in July, 1919, than in 1913, as shown by the curve on commodity wage rates. However, weekly earnings would deviate somewhat from the wage rate curve, on account of variations in the amount of employment.

ASSOCIATION OF LIFE INSURANCE PRESIDENTS. *Proceedings of the twelfth annual meeting, held in New York, December 5 and 6, 1918.* New York, 1919. 162 pp.

Papers of interest to labor were on Vocational retraining—a national conservation, by Dr. Charles A. Prosser; Group insurance as an influence in promoting stability in labor groups, by Eugenius H. Outerbridge; and Failure of German compulsory insurance—a war revelation, by Frederick L. Hoffman.

BABSON, ROGER W. *W. B. Wilson and the Department of Labor.* New York, Brentano's, 1919. 276 pp.

BLOOMFIELD, DANIEL (COMPILER). *Modern industrial movements.* New York, The H. W. Wilson Co., 1919. 377 pp. *The handbook series.*

This book contains a collection of articles which have appeared in periodicals and in reports and other publications on the following subjects: Cooperation; syndicalism, industrial unionism, and the I. W. W.; shop stewards; scientific management; guild socialism; management sharing; bolshevism; labor parties; and industrial reconstruction programs. A short bibliography on each subject is included.

BOSTON PUBLIC LIBRARY. *Industrial problems, chiefly American; selected references to books and magazines in the Public Library of the City of Boston.* Boston, December, 1919. 18 pp.

Contents: Collective bargaining and trade agreements; strikes and lockouts; boycotts and blacklists; injunctions in labor disputes; arbitration; open and closed shop; labor representation in industry.

BUREAU OF INDUSTRIAL RESEARCH, NEW YORK. *Selected list of references on trade and labor unions.* New York, 289 Fourth Avenue, December, 1919. 12 mimeographed pages.

BUREAU OF MUNICIPAL RESEARCH OF PHILADELPHIA. *Workingmen's standard of living in Philadelphia. A report, by William C. Beyer.* New York, The Macmillan Co., 1919. 125 pp.

BUREAU OF RAILWAY NEWS AND STATISTICS. *Railway statistics of the United States of America for the year ended December 31, 1918.* Chicago, 1919. 148 pp.

States that the average number of employees during 1918 was 1,897,741, as compared with 1,780,235 in 1917, and 1,703,577 in 1916. The total wages and salaries paid in 1918 was \$2,686,734,498, as compared with \$1,781,027,002 in 1917 and \$1,511,728,926 in 1916. The average compensation per employee in 1918 was \$1,416; in 1917, \$1,001; and in 1916, \$887. It is stated that nearly 60 of the 77 per cent, or over \$1,175,529,000 increase in the cost of labor between 1916 and 1918, went to the individual employee, and that only 17 per cent was due to the increase in the number employed.

Accident statistics show that for the first nine months of 1918, 7,056 persons were killed and 134,730 injured in railway accidents. In 1917 the number killed was 10,087 and the number injured 194,805. In 1916 the figures were 10,001 and 196,722, respectively. Of the persons killed in 1918, 394 were passengers on trains, 2,127 employees on duty, and 4,535 other persons, of whom 126 were employees not on duty, 2,442 were trespassers, 1,506 nontrespassers, and 461 persons killed in nontrain accidents.

BUREAU OF VOCATIONAL INFORMATION. *Vocations for business and professional women. Published in cooperation with the National Board of the Young Women's Christian Associations.* New York, 2 West 43rd Street, May, 1919. 48 pp. Bulletin No. 1.

Discusses "those occupations in which women have made a definite and permanent place for themselves and in which younger women, the workers of the future, may expect to find fields for service."

BURTON, THEODORE E., AND SELDEN, G. C. *A century of prices. An examination of economic and financial conditions as reflected in prices, money rates, etc., during the past 100 years.* New York, The Magazine of Wall Street, 1919. 118 pp. Graphs.

The text and graphs of this book first appeared in the Magazine of Wall Street. The aim is to "explain the great controlling principles of business and finance in the straightforward fashion of one business man talking to another." Chapters of special interest deal with Prices and an index of economic and investment conditions, Great economic forces since 1790, and What American commodity prices show.

ČAPEK, THOMAS. *The Čechs (Bohemians) in America. A study of their national, cultural, political, social, economic, and religious life.* Boston, Houghton Mifflin Co., 1920. 294 pp. Illustrated.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE. *Division of Economics and History. Preliminary economic studies of the war No. 14. British labor conditions and legislation during the war, by M. B. Hammond.* New York, Oxford University Press (American branch), 1919. 335 pp.

The social conditions in England prior to the war, particularly with relation to housing, drink, sickness, pauperism, and old age, and the effect which social legislation had upon problems of the war, are reviewed, as well as the condition of English industry and labor at the outbreak of the war. The author treats also of the effects of the munitions of war acts, the methods taken to secure an adequate supply of labor, changes in wages, cost of living, and hours of labor, measures taken for the relief of unemployment, and the problem of labor unrest. The final chapter is devoted to plans for industrial reconstruction, especially the Whitley councils, and the demands of the Labor Party for nationalization of public utilities.

CHELLEW, HENRY. *Human and industrial efficiency.* London, University of London Press, 1919. 170 pp.

An argument for the reconstruction of the relationships between employees and employed along the lines of scientific management. The author believes that housing and working conditions must be satisfactory, that every effort must be made to eliminate excessive fatigue, and that the psychology of the workers must be studied; also that the workers must be animated by "the right spirit," and that the greatest factor in efficiency, and therefore in success, is that the individual shall feel an interest in his work.

CLINIC FOR FUNCTIONAL REEDUCATION OF DISABLED SOLDIERS, SAILORS AND CIVILIANS. *First annual report, 1918-1919.* New York, 5 Livingston Place, 1919. 52 pp.

DOUGLAS, DOROTHY W. *American minimum wage laws at work.* Reprinted from the *American Economic Review*. December, 1919. Pp. 701-733.

A digest of this paper was published in the January, 1920, issue of the MONTHLY LABOR REVIEW, page 180.

ELMER, MANUEL C. *Armourdale, a city within a city.* The report of a social survey of Armourdale, a community of 12,000 people living in the industrial district of Kansas City, Kansas. Topeka, June 15, 1919. 91 pp. Illustrated. *Bulletin of the University of Kansas*. Vol. XX, No. 12.

GILBRETH, FRANK B. AND LILLIAN M. *Fatigue study.* The elimination of humanity's greatest unnecessary waste a first step in motion study. Second edition, revised. New York, The Macmillan Co., 1919. 175 pp. Illustrated.

HOLLANDER, JACOB H. *American citizenship and economic welfare.* The Weil lectures, 1919, delivered at the University of North Carolina. Baltimore, The Johns Hopkins Press, 1919. 122 pp.

Three lectures on The weal of the Nation, The laborer's hire, and The sinews of peace. In discussing wages the author holds that a progressive standard of life should form the basis upon which the final arbitral award is reached in the arbitration of all industrial disputes involving wage demands. He believes that "In the matter of collective bargaining, in the arbitral determination of labor disputes and in the validation of the standard of life as a wage principle—the industrial experience of the war years have resulted in notable progress," and agrees that the device of the local shop committee has been planted "so well and so broadly throughout industry—as hardly to seem eradicable."

HOLTZ, MAX L. *Review of the accomplishments of the Rochester clothing industry for the year 1919.* A report presented at the twenty-ninth annual meeting of the Clothiers' Exchange, December 20, 1919, by the president. [Rochester, 1919.] 24 pp.

The achievements of the Rochester market for the year 1919 are said to have been (1) the establishment of a definite labor policy, with the machinery for its administration, based on a system of collective bargaining that now has been adopted practically by the industry as a whole, and which has brought about a better understanding between employer and employee than exists in any other industry in the country; (2) the establishment of a definite market policy toward the retailer, based on the square deal; and (3) the development of the spirit of cooperation.

LABOR PARTY (BRITISH). *The capital levy (How the Labor Party would settle the war debt),* by F. W. Pethick Lawrence. London, 33 Eccleston Square, 1919. 8pp. Price, 2d.; post free, 2½d.

— *International economic policy,* by L. S. Woolf. London, 33 Eccleston Square, 1919. 10 pp. Price, 2d.; post free, 2½d.

— *Memoranda: Continued education under the new education act; The juvenile worker at the end of the war; Nursery schools.* London, 33 Eccleston Square, 1919. 24 pp.

These memoranda, prepared by the advisory committee on education, emphasize the points to be watched in the carrying out of the new education act; measures to be taken for coping with the problem of juvenile employment and unemployment; and the necessity for the early establishment of nursery schools, provided for in the act.

— *Tariffs and the worker,* by Brougham Villiers. London, 33 Eccleston Square, 1919. 8 pp. Price, 1d.; post free, 1½d.

LABOR RESEARCH DEPARTMENT. *Annual report, 1918-19.* London, National Labor Press, Ltd. [1919]. 24 pp.

LADD, MARY B. *List of references on the right to strike.* [Washington, 1919.] 16 pp. Reprinted from *Special Libraries*, December, 1919.

LANDSORGANISATIONENS I SVERGE. *Berättelse över Landsorganisationens verksamhet år 1917.* Stockholm, 1919. 179, 180 pp.

Report of the National Federation of Swedish trade-unions.

LLOYD, JOHN WILLIAM. *Cooperative and other organized methods of marketing California horticultural products.* Urbana, Ill., 1919. 142 pp. *University of Illinois studies in the social sciences*, Vol. VIII, No. 1, March, 1919.

MANES, ALFRED. *Versicherungs-Staatsbetrieb im Ausland.* Berlin, 1919. 128 pp.

In this volume has been collected the experiences of various State, provincial, and municipal Governments which either have established Government monopolies of insurance or have underwritten insurance in competition with private insurance companies. The States most extensively covered in the volume are Uruguay, which in 1912 established a general insurance monopoly, and Italy, which in the same year enacted a law making the underwriting of life insurance a state monopoly.

In summing up the results achieved by foreign Governments in carrying on an insurance business the author arrives at the following conclusions:

1. State insurance institutes operated in competition with private insurance companies as a rule have achieved indifferent results and only in exceptional instances have proved to be more advantageous to the community than private companies.

2. Monopolistic state insurance institutes established on the basis of voluntary insurance show even less favorable results from an economic point of view than state institutes operated in competition with private companies. This is perhaps due to the absence of competition.

3. In compulsory insurance countries the experiences of monopolistic state insurance institutes, at least with respect to fire insurance, were in part favorable, while the experiences in all other branches of insurance vary greatly, but were largely unfavorable.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *The cost of living among wage earners,* Lawrence, Mass., November, 1919. Boston, 1919. 21 pp.

This pamphlet is reviewed in this issue of the MONTHLY LABOR REVIEW, pages 71 and 72.

READE, W. H. V. *The revolt of labor against civilization.* New York. Longmans, Green and Co., 1919. 80 pp.

STÖSTRÖM, CHRISTOPHER. *Fackföreningsrörelsen och Socialdemokratien.* Andra upplagan. Stockholm, 1918. 30 pp.

Discussion of the relationship of the trade-union movement and the political labor movement (socialism).

SOCIAAL-DEMOCRATISCHE ARBEIDERSPARTIJ IN NEDERLAND. *Arbeidersjaarboekje*, 1919. Amsterdam [1919]. 190 pp.

Yearbook of the Dutch Labor Party for 1919.

SQUIRES, BENJAMIN M. *The Marine Workers' Affiliation of the Port of New York.* [New York, 1919.] pp. 840-874. Reprinted from *The Journal of Political Economy*, Vol. xxvii, No. 10, December, 1919.

Articles by Mr. Squires covering the facts contained in this article appeared in the MONTHLY LABOR REVIEW, August, 1918, pp. 45-62; September, 1918, pp. 1-26; February, 1919, pp. 12-27; April, 1919, pp. 246-249; August, 1919, pp. 173-185.

USSING, CARL. *De Kollektive arbejdsaftalers fremtid.* Copenhagen, 1919. 16 pp. *Dansk Forening for Socialpolitik*, 7. hefte.

This lecture delivered by the President of the Permanent Arbitration Court of Denmark appears also in the December, 1919, issue of *Social Forsorg* issued jointly by the staffs of the social insurance, factory inspection, and employment service of Denmark. After pointing out what he considers to be chronic defects in the present relations of capital and labor, Judge Ussing concludes that the collective agreement

is here to stay as a means of adjusting industrial relations, although the industrial conflict as such will continue. He recommends broadening the membership of the arbitration tribunal so as to include more than a single judge to represent the public or society at large.

WARD, HARRY F. *The New Social Order—Principles and programs.* New York, The Macmillan Co., 1919. 384 pp.

The first section of this book is devoted to a discussion of the need for a new social order; the second half is taken up with the programs for the new order.

WORKER'S EDUCATIONAL ASSOCIATION. *Sixteenth annual report and statement of accounts, July 1, 1919.* London, 16 Harpur Street, 1919. 60 pp.

This general report of the central council for 1918-19 covers the growth of the association, classes and lectures, summer schools, publications, a statement of accounts, district reports, overseas work, the constitution of the association, and a roster of the tutorial classes in 1918-19.

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The Cost of Industrial Accidents.¹

By ROYAL MEEKER, UNITED STATES COMMISSIONER OF LABOR STATISTICS.

THAT the cost of industrial accidents is enormous is recognized by all who have any knowledge of industry and of statistics. Just how enormous the cost is we do not know, and can not even guess. We do not know how many industrial accidents occur in any State in the Union. We know even less of the nature, results, and social cost of these accidents. The most important of all industrial accidents, unemployment, we have not even come to recognize as an accident at all, although it causes vastly more slowing down of production, demoralization, distress, and suffering than all other industrial mishaps.

No doubt most people suppose that very accurate and up-to-date statistics of industrial accidents causing physical injuries exist in the 42 States, 4 Territories, and in the jurisdiction of the United States Government, because of the workmen's compensation laws. Nothing could be farther from the truth. Statistics of accidents, their results and their cost, have been compiled in but few of these compensation jurisdictions, and such statistical compilations as have been made are utterly incomparable because of marked differences in the provisions of the different laws and the lack of standardization of the methods of statistical presentation. There is an astonishing lack of uniformity in these laws as to the industries and occupations covered, the waiting period and the amount of money compensation, and the medical benefits provided. The compensation law of New Jersey includes farm and domestic labor and fishermen besides industrial workers in the narrower sense. Mr. Carl Hookstadt, of the Bureau of Labor Statistics' staff, estimates that perhaps 98 per cent of all workers may be brought under the New Jersey Act. In Alabama, on the other hand, the exclusions are so numerous that the percentage of workers which may possibly be brought under the protection of this so-called compensation law is only 33.6 per cent. Mr. Hookstadt in his estimates has given the benefit of the doubt in every instance to the laws, consequently his estimates err on the side of too great liberality. This is noticeably true of Pennsylvania in which he credits the law with a coverage of 88.8 per cent of all wage earners, although farm, domestic, and casual labor are excluded,

¹ Address delivered at the Pennsylvania Safety Congress, held at Harrisburg, Pa., Mar. 21-25, 1920.

and Pennsylvania is, with all its industries, a great agricultural State. Maine, with an estimated coverage of 72.9 per cent, excludes farm, domestic, and casual labor and logging operations, one of the most important industries and the most hazardous one, of the State. Tennessee, with an estimated coverage of 37.2 per cent, excludes establishments with less than 10 employees, farm, domestic, "casual," and public employees, and coal mines, which employ more men than any other industry of the State in this the most hazardous, perhaps, of all industries.

There is no rhyme or reason to the exclusions of the laws in the different States. Some exclude nonhazardous occupations and industries; others exclude the hazardous occupations. Taking all the States together, Mr. Hookstadt's very liberal estimate credits the compensation laws with a coverage of about 65 per cent of the workers. When we consider the number who are shut out by failure to elect in those States having elective laws and the number who are ignorant of their rights to compensation under the law, I think not more than 40 per cent of the wage earners are actually enjoying the meager protection of our compensation laws.

The lack of uniformity in coverage is equaled or surpassed by the inexplicable inequalities in money and medical compensation benefits provided in the laws. The length of the waiting period too varies considerably, thus causing the amount of compensation benefits to vary. It is impossible in this paper to indicate the extent of the variations in the amount of compensation provided. It is even more impossible to ascertain the reasons or the vagaries which obsessed the legislators in enacting some of the more peculiar of the compensation laws. But surely, it will be said, the States must know how much is paid out each year for compensation and from these figures a reasonably accurate calculation or estimate of the cost of industrial accidents can be made. Perhaps the States know how much they pay in compensation each year; but if they do they, with few exceptions, keep this valuable information strictly to themselves. Even if this information were available, it would be an impossible task, for reasons pointed out above, to translate it into the money costs of industrial accidents, to say nothing of the other costs.

It does seem incredible that of the 42 jurisdictions which have had workmen's compensation laws long enough to give them accident compensation experience, only 26 have found it possible or worth while to publish anything showing the costs of compensation to the employers covered in their acts. Of course, many compensation commissions may have knowledge of what they are doing which they do not give to the public. Employers, employees, and the undefined public have a right to know all the facts regarding the number and severity of accidents and the amount of compensation paid. This

information is so easy to compile, it would seem possible for all jurisdictions to make it public every year. Even the astonishingly meager information extant is discouragingly vague and impossible of interpretation.

State Compensation Reports.

IT IS too soon to expect reports for 1919, but California, Montana, and the United States Employees' Compensation Commission have already reported for that year the money payments for fatal and non-fatal cases and the medical costs. Only five States—California, Maryland, Minnesota, Montana, and New Jersey—report compensation payments separately for fatal and nonfatal cases and for medical treatment and burial for the years 1916 to 1918, inclusive. Michigan reported these costs for the year 1916 and then quit, Nebraska for 1917 and 1918, and the United States Employees' Compensation Commission for 1918. Oklahoma and Wisconsin show for the three years, 1916–1918, the total money compensation and the medical and burial benefits. Hawaii, New York, and Vermont published this information for 1916; Texas for 1916 and 1918; Massachusetts for 1916 and 1917; Iowa for 1917 and 1918; and South Dakota for 1918. Ohio and Nevada have published the total amounts paid for compensation and burial for 1916–1918; Connecticut for 1916 and 1917; Pennsylvania for 1916; Colorado for 1917 and 1918; Indiana for 1917; Kentucky and Wyoming for 1918.

Seventeen jurisdictions have thus far published for the year 1918 the total amounts paid for all compensation, including medical benefits. The years cover quite different months. Some are calendar years, some fiscal years, and some compensation years determined by the date when the compensation laws became operative. The total amount of all compensation as reported by these 17 jurisdictions was \$16,782,610. The total estimated number of workers included therein was nearly 11,600,000 and the total estimated number entitled to come under the acts was 5,360,000. If we assume that five million workers were actually brought under the acts, the compensation payments would amount to a yearly charge of \$3.36 per employee. The utter uselessness of this average of a whole series of averages is shown by bringing it into contrast with the average cost of \$4.85 per employee for Ohio, \$4.39 for California, and \$1.72 for New Jersey. These wildly different costs bear no readily ascertainable relationship to the actual costs of accidents in these different States. The real cost of accidents in Ohio is not of course two and one-half times their cost in New Jersey. The differences are due to differences in industries covered, waiting period, amount of compensation provided, maximum and minimum limits, and other differences in the acts and the administration of them.

It will be readily conceded that the way of the proverbial transgressor is no harder than that of the virtuous statistician bent on compiling statistics of compensation payments in the various compensation jurisdictions within the United States. Why worry about these compensation payments by the States? If we had them they would not mean a thing as to accident frequency, accident severity, or accident cost. Very true, but the employers, employees, legislators, and administrators of each State should know how much is being awarded every year in their State in compensation to injured workers regardless of the fact that these amounts represent only a fraction of the actual social losses due to industrial accidents in each State.

It is a waste of time to try to compute the costs of industrial accidents from the reports of compensation payments made by the States. It is, however, well worth while to show just how far we still are from knowing anything definite about these costs or even about the payments made by employers under the compensation laws. If what I have said will have the effect of spurring some delinquent State to provide for something like adequate statistics of accident occurrence, results and cost, I shall feel that my labors with the not very fascinating or illuminating reports have not been in vain.

Are Accidents Decreasing?

BEFORE leaving this arid statistical desert, I wish to call attention to the fact that compensation payments are increasing year by year in all the States which have published figures which enable us to make comparisons. The unwary might jump to the conclusion that these increases are due to the growing number of industrial accidents. It may be that accidents are increasing. It is a shameful confession to be obliged to make, but we don't know whether the net result of our efforts to reduce industrial accidents has been more accidents or fewer accidents, a greater or a smaller loss in disability-time. I can not formulate a stronger plea for better and more complete statistics than these poor mute figures shout from the pages of these reports. We do know that certain plants have cut down the frequency of accidents. The analyses made by Mr. L. W. Chaney of the accident records of some steel plants show that they have not only reduced their accident frequency rates, but, what is of real importance, they have cut down their severity rates as well. Fewer man-hours are lost per 1,000 hours worked by some establishments to-day than before the war, and that in spite of most adverse conditions. Whether these encouraging results apply to the whole steel industry or not, we can not say. As to what is happening in other industries, we are as blissfully ignorant as the ostrich with his head buried in the sand.

Some individual plants require very complete reporting of every accident and some of these plants tabulate and analyze these reports for the purpose of reducing accidents and accident costs. I am bound to say, however, that only a few of the largest and most progressive employers know whether their accident experience is improving or growing worse. Some who think they are improving fool themselves into so thinking, because they are able to show a smaller number of accidents or a smaller rate of accident occurrence. If these employers had their accidents tabulated by severity of injury their time losses would show greater than at any time since they began to preach the gospel of safety-first to their workers.

I am ready to believe that the accident severity rate has not grown worse since 1912, when the safety movement became fully organized. I am ready to believe it, because I want to believe it. Individual plants and great corporations comprising many plants have reduced their accident rates, both frequency and severity rates. What has been done by one employer, or perhaps one industry, can surely be done by many or all. I am quite willing to believe that the growing compensation bill, the universal experience in all States, is due to extending the coverage of the laws, liberalizing the compensation provided, cutting down the waiting period, better and more enlightened administration methods and practices, and the growing knowledge of the workers as to their rights under the laws. Let us hope these explanations really explain this phenomenon. But why should we trust to blind faith when the expenditure of a few thousand dollars would give us assured knowledge? Faith is a beautiful trait. In its proper place it is a virtue greatly to be praised; but it is no fit substitute for statistics in determining public policy or the results of a public measure.

Of course, the economic cost of industrial accidents was enormously greater before compensation laws were enacted. It can not be too frequently or too emphatically stated that providing for compensation payments to injured workers does not create a new cost to be borne by industry and the community. It merely readjusts the burdens, thereby making them lighter to carry and incidentally bringing home to employers and the public the fact that industrial accidents are an expensive luxury. The first workmen's compensation laws were advocated and their enactment secured largely under the theory that the vast majority of industrial accidents occur through nobody's fault or negligence and that therefore the theories of employer's liability, employee's carelessness, and contributory negligence were all wrong. If necessity is the mother of invention, experience is its father. A short experience under compensation laws convinced insurance carriers and insurance payers that industrial accidents are not a divinely ordained and established part of the

great plan of creation, and therefore beyond the power of mere man to control or influence in any way. The more enlightened insurance companies and employers had made this important discovery long before compensation legislation had been thought of in this country, but it required the painful experience of paying for industrial injuries and the necessity of reducing these charges on the costs of production to bring forth the idea that industrial accidents are not chance occurrences like thunderstorms, earthquakes, and volcanic eruptions, but are, in most instances, the inevitable results of negligence on the part of either employer or employee. Do not misunderstand me as advocating a return to the old employers' liability system with the common-law defenses. It would be difficult to devise a more unjust system than that. In few cases of industrial accident can negligence of the employer be proven. Negligence on the part of the employee is more obvious, but even that is not easy to prove. The old liability system was thoroughly bad with its expensive litigation, cumbersome and occult court procedure, long delays, unsatisfactory verdicts, and consequent aggravation of class suspicions and hatreds. To-day, however, we who take pride in working for the common welfare advocate the workmen's compensation laws more vigorously than ever, not because industrial accidents are inevitable, but because they are inevitable but avoidable consequences of bad shop and machine construction, or bad shop practice. The best way to improve these bad features is to make it costly to the backward, unenlightened employers to continue them or allow them to be continued. I do not, of course, say that all that has been accomplished in the way of reducing, or preventing the increase of, our accident rates is the result of the enactment of compensation laws. I do say, however, that the compensation laws have done more than any other one thing to stimulate interest in and give an intelligent program to the safety movement. Accident reports are for the first time required by law and some progress has been made toward gathering and compiling standard accident tables. The accident records are being studied for the first time by capable statisticians and safety men for the purpose of ascertaining how, why, and what accidents occur and of preventing as many as can be prevented. Our knowledge of accidents, like our compensation laws, is still very imperfect, but we at least realize that industrial accidents are costly and that they are, to an unbelievable degree, preventable.

The Accident of Unemployment.

AS TO unemployment, the most costly and the only purely industrial and occupational accident, we have no reliable record whatever. A man may break his arm by falling over a cuspidor in his home; he may be killed by any fool driving an automobile.

Everything in the way of a physical injury that can occur to him while working at his regular occupation can happen to him in his home, on the street, at church, any place he may be. But the only way he can become unemployed is to lose his job. Nonindustrial physical injury accidents are probably quite as numerous as and even more destructive than industrial physical injury accidents. There is no such thing as nonindustrial unemployment. It is therefore the only purely industrial hazard. There are two very distinct kinds of unemployment—what we may call out-of-work unemployment and unemployment on the job. Both result in material loss to the individual worker and to society and in the demoralization of the worker. Out-of-work unemployment is a self-explanatory term and needs no elucidation. By “unemployment on the job,” I mean the lost time and consequent slowing down of production because of the deliberate expert loafing on the part of the workers, or the lack of a proper system of routing of work, and insufficient reserves of tools, machines, and skilled pivotal men to keep the whole force working smoothly.

The unemployment due to strikes excites most attention, because the newspapers and magazines play up such dramatic manifestations. Newspaper correspondents are in the habit of setting down their guesses as to the cost in money of the more important strikes, while some especially ambitious writers have attempted to estimate the money cost of all strikes for a selected period. I do not wish to try to diminish the seriousness of the menace or the appalling waste occasioned by strikes, when I say that the individual and social losses from strikes are relatively unimportant as compared with the losses from unemployment of the regular, orthodox, undramatic type that doesn't get any newspaper advertising. The cost of strikes is commonly displayed as losses of wages to the strikers, loss of profits to the employers, and loss of interest on capital invested. These estimates are necessarily crude and often misleading. It sometimes happens in a big strike that the curtailment of production results in such a sharp advance in the price of the product that the employer makes not a loss but a net gain. In such a case idle capital earns more for the owners than busy capital. But this fact does not convert the capital loss into a gain. In such a case the buying public and the wage earners bear the whole burden of the material losses incident to the strike. If the wage earners win the strike they may be able to drive such a shrewd Scotch bargain as to shift the entire burden of loss to the ultimate consumers. It would be more accurate to calculate the material losses of a strike in terms of product unproduced and then allocate the losses between the several parties at interest, taking account of changes in prices and wage rates in the industry.

If the material losses were to be computed as indicated above at the expense of great labor and much time, the computer could tri-

unplausibly display an appallingly huge sum of money which would be a more or less inaccurate estimate of the material cost of the strike or strikes and which would give no hint of the really important and significant costs of these industrial upheavals. Money can not measure the class suspicion and hatred generated or aggravated, the demoralization of the workers resulting from idleness, especially if the strike is lost, the inconvenience, destitution, suffering, and death to workers and to consumers which so frequently accompany a big strike bitterly contested.

Prevalence and Cost of Unemployment.

STRIKES and lockouts have contributed their thousands to the ranks of the out-of-workers, but irregularities and failure in supplies of raw materials, transportation, and demand for commodities produced, and lack of proper organization in industry, have contributed their millions. No statistical statement is possible, for no accurate information exists as to the time lost by reason of strikes, to say nothing of our almost 100 per cent of ignorance of the time lost due to other causes. We do know in a general way that unemployment has existed during prosperous conditions of industry to an appalling degree. For years the States of Massachusetts and New York published figures showing percentage of unemployment among trade-union members in those States. In Massachusetts the unemployment percentage among unionists rises to 17.9 per cent in 1914, while the minimum at any time since 1908 was 3 per cent in 1918. The unemployment percentage is even greater in New York State, the maximum being 40.1 per cent in 1913, and the minimum 5.9 per cent in 1912. Unemployment among trade-union members in Great Britain, as shown by official figures, rarely exceeds 8 per cent and drops as low as three-tenths of 1 per cent of the total membership.

No accurate comparisons between Great Britain and New York and Massachusetts are possible because unemployment in Great Britain is determined by the receipt of trade-union unemployment benefits which are paid for varying periods that differ among the unions—usually only after the member of a union has been out of work for one week, and not more than 26 weeks. Few American unions pay out-of-work benefits and the trade-union secretaries in most instances reported as unemployed all nonstriking members of their unions who were not actually working on a given date or over a period of time. The British figures were, of course, much more complete and accurate than the New York and Massachusetts figures, for they were based upon numbers actually receiving unemployment benefits, whereas the American figures included only those reporting to the union headquarters or the number estimated (guessed at) by the secretary. The

British figures differentiate those out on strike or lockout from those unemployed through other causes. The American figures are supposed to exclude workers out on strike. How much the American figures would be reduced if we could exclude all unemployment under one week, or how much the British figures would be increased if all unemployed were counted on a selected day, we can only guess. It seems inescapable, however, that if the figures could be corrected and brought to a common basis, unemployment among trade-unionists would be shown to be several times more prevalent in the United States than in Great Britain in the years before the war. How unemployment in the two countries would compare to-day we have no means even of guessing. The Unemployment Insurance Act of Great Britain enables the Government and the people to know very accurately the amount of employment and unemployment at any time. In the United States we know less than ever about unemployment because both New York and Massachusetts have given up their efforts to ascertain the number of trade-union members out of work. The only official figures we now have bearing on employment and unemployment for the whole country are those published in the MONTHLY LABOR REVIEW, giving for a limited number of plants in certain industries the number of employees on the pay roll and the amount of the wage bill each month, and the statistics of strikes which are carried from time to time.

The percentage of unemployment among nonunion workers is always higher than among union members. This was especially true of the United States before the war, when it was the deliberate policy of the largest employers of labor, especially unskilled or semiskilled labor, to keep on tap, as it were, a large reserve force of labor upon which to draw in case of strike or any emergency requiring additional men. This practice has almost disappeared because the surplus supply of labor has been succeeded by a dearth of labor in most localities and industries. One inevitable result of the very profound changes in labor supply has been to increase the proportion of the unemployed who are out of work because of strikes. But we must not too hastily jump to the conclusion that all or most unemployment to-day is due to strikes. No definite statistical information exists, but from a study of such cases as have come to my attention I am convinced that strikes to-day, as always, are insignificant in causing stoppage of work in comparison with unemployment due to dearth of raw materials, lack of orders for output, insufficient transportation, lack of a properly balanced organization of industry, lack of an intelligent employment policy for hiring and handling men, failure to gain and keep the good will of employees, failure to make use of the tremendous latent creative force lying dormant in the workers.

I have heretofore been unfavorable to unemployment insurance in this country for the reason that we lack the necessary machinery to carry such a law into effect. The dangers of industrial catastrophe and depression which lie in the not distant future make it absolutely necessary that we adopt now a constructive program to deal with unemployment. For the guidance of legislators and administrators the facts as to employment and unemployment must be known. A proper system of unemployment insurance is, I think, indispensable for ascertaining the amount and kind of unemployment. It is not necessary that the unemployment benefits be so large as to support idlers in idleness. The trained expert loafers who work at their craft all the year round would, of course, be excluded from benefits. The good old law which John Smith created and executed in the colony of Virginia should be revived. "Those who won't work can't eat." Unemployment insurance connotes, as a necessary part of the system, that everybody shall work when suitable work is offered.

The cost of this most costly and destructive of all industrial hazards, unemployment, is appalling. Its money cost, reckoned in terms of product unproduced, services unrendered, and capital goods lost or deteriorated in value, I estimate, or guess, would amount to more than half the value of the yearly product of all our industries. This means that we are operating our industries on a 66 $\frac{2}{3}$ per cent efficiency basis and are losing by not producing something like thirty-five billion dollars a year, just because we have not yet recognized that ignorance, however blissful, is mighty expensive. Of course, unemployment insurance alone will not increase our national income to more than one hundred billion dollars at a single bound. But it will help to call attention to the cost of unemployment, just as workmen's compensation laws have called attention to the costs of the less costly and less demoralizing industrial accidents which result in physical maimings and deaths. The aim of all employers, employees, managers, and engineers should be to prevent all preventable industrial accidents. In order to do this they must be informed as to what, where, and how accidents occur, the results of such accidents, and the means by which they may be reduced or eliminated. The greatest need of the world to-day is for facts—statistical facts. Every dollar spent for real statistics will save two dollars which will otherwise be wasted in needless experimentation.

COST OF INDUSTRIAL ACCIDENTS.

11

COMPENSATION PAID FOR ACCIDENTS IN RECENT YEARS IN 25 STATES AND IN THE UNITED STATES.

States reporting amount paid for fatal and for nonfatal accidents, and for medical and burial service.

1916.

State.	Fatal.	Nonfatal.	Compensation total.	Medical and burial.	Grand total.
California.....	\$203,286	\$947,217	\$1,150,503	\$852,202	\$2,002,705
Maryland.....	22,043	245,859	267,902	119,176	387,078
Michigan.....	405,347	1,318,270	1,723,617	189,456	1,913,073
Minnesota.....	42,029	382,054	424,083	255,542	679,625
Montana.....	169,201	103,846	273,047	20,441	293,488
New Jersey.....	355,016	552,575	907,591	158,059	1,065,650
Nebraska.....					
West Virginia.....	578,400	401,740	980,140	113,752	1,093,892
United States.....					

1917.

California.....	\$250,361	\$1,316,654	\$1,567,015	\$1,109,073	\$2,676,088
Maryland.....	30,461	415,481	445,942	145,268	591,210
Michigan.....		452,648	517,622	257,014	774,636
Minnesota.....	64,974	220,990	471,791	38,887	510,678
Montana.....	250,801	727,561	1,131,339	150,499	1,281,838
New Jersey.....	403,778	101,204	109,846	53,326	163,172
Nebraska.....	8,642	511,225	1,179,025	140,118	1,319,143
West Virginia.....	667,800		238,628	70,460	309,088
United States.....					

1918.

California.....	\$241,884	\$1,263,562	\$1,505,446	\$1,178,357	\$2,683,803
Maryland.....	56,742	381,992	438,734	231,175	669,909
Michigan.....		647,472	696,247	336,362	1,032,609
Minnesota.....	48,775	137,558	482,522	39,502	522,021
Montana.....	344,964	962,734	1,346,490	136,828	1,483,318
New Jersey.....	383,756	90,967	102,540	40,536	143,076
Nebraska.....	11,573				
West Virginia.....		453,927	533,086	173,170	706,256
United States.....	79,159				

1919.

California.....	\$273,831	\$1,963,203	\$2,237,034	\$1,228,617	\$3,465,651
Montana.....	208,258	220,195	428,453	28,556	457,009
United States.....	226,619	906,595	1,133,214	266,542	1,399,756

States reporting total amount paid for accidents and for medical and burial service.

State.	1916			1917			1918		
	Total compensation.	Medical and burial.	Grand total.	Total compensation.	Medical and burial.	Grand total.	Total compensation.	Medical and burial.	Grand total.
Hawaii.....	\$10,135	\$19,397	\$29,532						
Iowa.....				\$249,965	\$75,471	\$325,436	\$334,970	\$60,080	\$395,050
Mass.....	1,334,020	636,292	1,970,312	1,738,011	907,175	2,645,186			
N. Y.....	9,369,000	3,443,000	12,803,000				452,988	210,775	663,763
Okla.....	198,713	91,546	290,259	318,681	188,015	506,696	43,656	24,925	68,581
S. Dak.....							686,958	214,973	901,931
Tex.....	389,324	103,875	493,199						
Vt.....	66,764	30,357	97,121						
Wis.....	938,774	277,415	1,216,189	1,184,371	391,958	1,576,329	1,278,383	427,085	1,705,468

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COMPENSATION PAID FOR ACCIDENTS IN RECENT YEARS IN 25 STATES AND IN THE UNITED STATES—Continued.

States reporting only total amount paid.

State.	Total amount paid in—		
	1916	1917	1918
Colorado.....		\$394,901	\$383,766
Connecticut.....	\$775,167	1,319,432	
Indiana.....		751,297	
Kentucky.....			118,705
Ohio.....	2,309,721	3,966,708	4,893,122
Nevada.....	165,982	313,002	316,276
Pennsylvania.....	1,406,901		94,953
Wyoming.....			

NUMBER AND PER CENT OF WORKERS COVERED BY COMPENSATION ACTS.

State.	Total workers in State.	Workers covered by act.	
		Number.	Per cent.
California.....	1,058,836	611,941	76.2
Maryland.....	523,219	188,433	45.9
Minnesota.....	1,080,812	597,585	83.1
Michigan.....	788,533	379,349	79.0
Montana.....	159,345	56,826	50.9
New Jersey.....	1,035,858	861,963	99.8
Nebraska.....	417,894	146,034	70.4
West Virginia.....	425,654	212,812	80.1
United States.....	553,991	553,991	100.0
Hawaii.....	98,052	80,319	92.6
Iowa.....	786,220	266,936	62.7
Massachusetts.....	1,497,654	1,109,134	87.8
New York.....	3,897,994	2,503,020	80.1
Oklahoma.....	582,419	87,522	35.9
South Dakota.....	210,978	53,997	58.0
Texas.....	1,504,719	306,777	47.9
Vermont.....	139,032	50,942	55.2
Wisconsin.....	862,160	405,009	75.4
Colorado.....	318,586	137,157	63.1
Connecticut.....	479,598	322,211	81.9
Indiana.....	993,066	502,729	79.4
Kentucky.....	842,551	253,281	60.2
Ohio.....	1,844,103	1,008,813	76.3
Nevada.....	41,149	21,746	76.2
Pennsylvania.....	2,996,363	2,149,567	88.8
Wyoming.....	60,795	19,857	46.3

The law of Pennsylvania offers an experience of four years, from January 1, 1916, to December 31, 1919. The following is a summary of this experience prepared by the statistician of the compensation board, showing compensation awards and payments, medical costs not included.

Special attention is called to the fact that for fatal accidents the figures represent cases for which awards were made (not the number of cases occurring) in each year, the sum being the full amount of compensation awarded during the year, including \$100 funeral benefits.

For nonfatal accidents covered by the schedule for major dismemberments (loss of eye, arm, hand, leg, or foot) the amount reported is the full award made in cases adjudicated during the year;

while in other cases the report is of the full amount paid on account of disabilities which terminated during the year.

These figures are not comparable with those given above for other jurisdictions, and are presented solely as showing compensation payments and awards in an important industrial State.

COMPENSATION EXPERIENCE IN PENNSYLVANIA FOR FOUR YEARS, 1916 TO 1919.

[Medical cost not included.]

Year.	Fatal accidents.		Nonfatal accidents.		Total.	
	Number of cases.	Compensation. ²	Number of cases.	Compensation. ³	Number of cases.	Compensation.
1916.....	1,727	\$4,116,075	69,566	\$3,417,655	71,293	\$7,533,730
1917.....	1,946	4,189,328	48,122	2,265,884	50,068	6,455,212
1918.....	2,607	6,859,718	67,313	4,780,197	69,920	11,639,915
1919.....	2,496	6,431,155	54,609	4,551,681	57,105	10,982,836
4 years.....	8,776	21,596,276	239,610	15,015,417	248,386	36,611,693

² Awards made during year.

³ Awards made during year in schedule cases; total benefits paid in other cases.

Scope and Operation of the Workmen's Compensation Laws of the United States.

By LINDLEY D. CLARK.

A QUESTIONNAIRE of the British Government on the subject of compensation to workmen for injuries was submitted to the Department of Labor for information as to conditions and results under the laws of the various States. This questionnaire called for data not to be found in any single publication now in existence. The laws in existence at the end of the year 1916 appear in Bulletin No. 203 of the Bureau of Labor Statistics; new legislation and amendments of 1917 and 1918 appear in Bulletin No. 243. Legislation of 1919 has been collated, but the date of its publication can not yet be announced. A comparison of the laws in force up to December 31, 1917, with detailed analysis covering many of the points of the questionnaire appears in Bulletin No. 240. This bulletin has been revised and brought up to date, but will not be ready for distribution for some time. The published bulletins present the facts largely as they exist, no very considerable modification having taken place by reason of recent legislation, though many minor changes have been made, and some of more importance. New laws have also been enacted in four States—Alabama, Missouri, North Dakota, and Tennessee—not mentioned in any of these bulletins. A very general summary reply to the inquiries under the various heads of the questionnaire was prepared, the facts shown being as of December 31, 1919. The questionnaire follows:

Workmen's compensation. British questionnaire, 1919.

I.—Scope of System.

1. What occupations and industries are included?
2. What classes of workers are included? What special provisions are there, if any, in regard to particular classes, e. g., State employees and seamen?
3. Are any, and, if so, what industrial or occupational diseases covered as well as injuries by accident? What special provisions are there, if any, in regard to such diseases?

II.—Character of System Adopted.

1. Whether (a) State fund.
(b) Mutual associations.
(c) Private insurance companies.
If there is a State fund, whether it has a monopoly, or competes with private insurance companies and mutual associations.
2. Security for payment of compensation—whether by compulsory insurance, State guaranty, or otherwise.
3. If compulsory insurance, how does the State enforce the obligation on the employer to insure?

4. If there is a State guaranty—
 - (a) What is its form?
 - (b) If a fund is established, from what source is it maintained, how is it administered, and to what extent is it drawn upon?
 - (c) What risks are covered?
5. If no security by compulsory insurance or State guaranty, what evidence is there of workmen's loss of compensation through inability of employers to pay, insolvency of insurance company, and so forth?
6. Self-insurance.—If allowed, on what conditions and to what extent resorted to? Is any other form of contracting out permitted?
7. Reasons, historical, economical and otherwise, why system actually in force was adopted, and whether, since inception, it has undergone any, and, if so, what modifications, with reasons for the change.
8. Criticisms by employers, workers or others of existing system.

III.—Comparison of Different Methods of Insurance.

Where alternative methods of insurance are allowed—

- (1) How do State fund, mutual associations, and private insurance companies compare, in regard to efficiency and services given, with special reference to methods adopted to secure expedition in dealing with claims?
- (2) Comparison, accompanied where possible by detailed statistics, showing—
 - (a) Cost of premiums or assessments.
 - (b) Numbers of employers adopting the alternative methods generally, or according to particular trades.
 - (c) Cost of administration as compared with amount of compensation paid.

IV.—Organization of State Funds.

1. ADMINISTRATIVE:

- (a) Constitution, powers, and procedure of authorities administering funds.
- (b) Extent to which representatives of employers and workers respectively have a voice in management.
- (c) Does State employ agents or advertise when State fund is in competition with private companies?
- (d) Machinery for payment of compensation or benefit. Is agency, e. g., of post office, resorted to?

2. FINANCIAL:

- (a) Are sufficient moneys raised in each year to cover?

- (1) The cost of claims which arose during the year and were disposed of during the year, e. g., cases of temporary incapacity when the worker has recovered?
- (2) All liability in respect of claims which arose during the year and were a continuing liability at the end of the year, e. g., cases where incapacity is still continuing and which involve future payments? Is the sum set aside for every case of permanent total or permanent partial incapacity estimated on an annuity basis, and, if not, how is it estimated? Are periodical valuations made to ascertain whether the yearly provision made for liability for outstanding claims has in fact proved sufficient?

- (b) Sources of income.

- (1) Do workers contribute, and to what extent?
- (2) Does State contribute, and to what extent—whether by direct payment, or by the provision of services of officials, office accommodation, traveling expenses, etc., the cost of which is charged to general State outlay and not to the State fund?

2. FINANCIAL—Continued.

(c) What are the requirements as to reserves?

(d) Is the solvency of the fund guaranteed by the State? If so, how?

(e) Premiums.

Principles and methods of establishing rates. Risk classification.

How far are premiums or contributions varied from year to year according to risks of each particular establishment or class of establishment?

(f) Financial difficulties encountered, their cause, and how surmounted?

(g) When State fund set up and given a monopoly of workmen's compensation insurance, what provision, if any, was made in regard to existing private insurance companies?

(h) When State fund set up to compete with private companies, what has been the effect on the cost of the premiums of the latter?

V.—Organization of Mutual Associations.

1. ADMINISTRATIVE:

(a) Basis on which constituted, e. g., by trades or districts.

(b) Constitution and membership. Whether any minimum requirements as to numbers of employers or size of area.

(c) Extent and methods of cooperation (if any) of State or of local authorities in administration.

(d) Special provisions, if any, for particular employments, e. g., agriculture, navigation.

(e) Extent to which representatives of employers and workers have a voice in management.

(f) Machinery for payment of compensation or benefit. Is agency, e. g., of post office, resorted to?

2. FINANCIAL:

(a) How amount to be raised each year is arrived at.

(b) Are sufficient moneys raised in each year to cover—

(1) The cost of claims which arose during the year and were disposed of during the year, e. g., cases of temporary incapacity where the worker has recovered?

(2) All liability in respect of claims which arose during the year and were a continuing liability at the end of the year, e. g., cases where incapacity is still continuing and which involve future payments.

Is the sum set aside for every case of permanent total or permanent partial incapacity estimated on an annuity basis, and, if not, how is it estimated?

Are periodical valuations made to ascertain whether the yearly provision made for liability for outstanding claims has in fact proved sufficient?

(c) Sources of income.

Does State contribute, and to what extent?

Do workers contribute, and to what extent?

(d) What are the requirements as to reserves?

(e) Premiums or assessments.

Principles and methods of establishing rates.

Risk classification. How far are premiums or assessments varied from year to year according to risks of each particular establishment or class of establishment?

(f) Financial difficulties encountered, their cause, and how surmounted?

VI.—State Regulation and Supervision.

1. Is there State regulation and supervision—
 - (a) Of private insurance companies in regard to—
 - (1) formation and operation;
 - (2) form and provisions of policies;
 - (3) financial soundness;
 - (4) premium rates?
 - (b) Of mutual associations in regard to—
 - (1) formation and operation;
 - (2) financial soundness;
 - (3) premiums or assessments on members?
2. Organization and powers of central department or board exercising such regulation and supervision.
 - (a) To what extent does it act through local bodies, branches, or agencies?
 - (b) What periodical statistics and returns does it require from insurance companies and mutual associations?
3. Cost of State regulation and supervision.
Whether borne wholly or in part by the funds of—
 - (a) private insurance companies;
 - (b) mutual associations.

VII.—Cost of Compensation.

1. Figures showing cost to industry generally, and to the chief industries in particular.
2. Has cost risen in recent years? If so, to what extent, in what class or classes of cases, and what is the cause?

VIII.—Benefits.

1. In case of death—
Amount—to whom paid and how apportioned—whether in form of lump sum or pensions—in case of pension, subject to what conditions if lump sum, what steps taken to insure profitable use of money.
2. In case of incapacity—
Scale for total incapacity—scale for partial incapacity—date from which compensation begins—is any distinction drawn between permanent and temporary incapacity as regards scale and nature of benefit—provisions for review if commutation allowed, how calculated, and whether lump-sum payment permitted?
3. Does compensation vary according as accident was due to—
 - (a) Fault of workman;
 - (b) General hazard of industry;
 - (c) Fault of employer?
4. Is there any scale for compensating injury according to nature of physical injury, occupation, and age of injured person?
5. Is disfigurement a ground for compensation and, if so, how is amount determined?
6. Is medical and surgical aid included among benefits? If so, in what circumstances and at what stage; and how is it administered?

IX.—Old and Infirm Workers.

Effect of workmen's compensation laws on the employment of the old and infirm.
Are there any special provisions in such laws for their protection?

X.—Relation of Accident Insurance with Any Other Forms of Insurance.

Is accident insurance administered in coordination with any other forms of insurance? For example, sickness or invalidity insurance? If so, to what extent are they worked as parts of the same system, and what are the circumstances determining which form of insurance applies?

XI.—Malingering.

1. Extent to which it exists and precautions adopted.
2. To what extent it varies under different methods of insurance, and reasons for such variation.

XII.—Accident Prevention in Connection with Workmen's Compensation.

1. Direct or indirect effects of workmen's compensation laws on number of accidents.
2. What provision, if any, is made under workmen's compensation law with this object, and is it supplementary to or in lieu of other laws and regulations for promoting industrial health and safety, and, if supplementary, how is overlapping in administration avoided?

XIII.—The Determination of Claims.

1. How far and on what conditions and subject to what supervision are agreements as to compensation allowed between the worker and the employer or compensation authority?
2. To whom or to what authority are claims submitted in the first instance?
3. Constitution and procedure of tribunals established for adjudicating on claims.
4. How far do administrative bodies sit also as judicial tribunals?
5. Provisions for appeal.
6. How medical aspect of case dealt with.
7. Whether expert assistance given in regard to lodgment and pursuit of claims.
8. Expense incurred in connection with settlement of disputes and determination of claims—
 - (a) By employers;
 - (b) By workmen.
9. How is delay avoided in the payment of benefit in cases where the claim is admitted? What time elapses as a rule between the date of claim and payment of benefit?
10. Extent of litigation.

XIV.

Whether any change in existing law is in contemplation or demanded. If so, nature of demand, classes of community making the demand, and causes for the desire for change.

XV.—Voluntary Insurance of Persons not Subject to Compulsory Insurance.

Whether in existence (if so, details) or in contemplation.

The reply follows:

I.—Scope of System.

THE occupations and industries included vary in the laws of the 42 States having legislation on this subject, some being enactments covering practically the whole body of industrial undertakings, while in others there is a limitation to so-called hazardous or extra-hazardous employments. Domestic and farm labor is very generally excluded. Some laws provide compensation for such employees only as are exposed to the hazards of the employment, though more generally all employees of an employer covered by the act come

within the provisions of the law. A majority (30) of the States are elective as regards the acceptance of the provisions of their laws, leaving it to the choice of the employer and the employees whether they will adopt this form of accident relief, or will continue under a liability system; however, where the employer declines to accept the provisions of the compensation law, the common-law defenses of fellow service, assumption of risk, and contributory negligence are abrogated; in 12 States and under the Federal statute the compensation system is compulsory, and must be accepted by the classes of employers embraced within the act,¹ while other classes may also avail themselves of the provisions of the law by election.

An exclusion that arises by reason of the relation of the State and Federal Governments is that of railroad employees engaged in interstate commerce. These come under the Federal liability law, to the exclusion of State legislation; and to avoid complications, a number of the States exempt all railroad employees, intrastate as well as interstate, from the provisions of their compensation laws.¹

All classes of workers engaged in the industries covered are, as a rule, embraced within the provisions of the laws. Casual employees, not engaged in the regular work or business of the employer, are quite generally excluded.¹

State employees are compulsorily covered in a number of the laws in which private employment is covered only after election. On the other hand, in a few States, public employments are excluded.¹ The Federal statute relates to public employees only, which is true also of the extension of this law to the District of Columbia.

There is no special treatment accorded seamen, unless it be one of neglect. Being subject to Federal control on account of the jurisdiction of Congress over interstate and foreign commerce, they occupy a position somewhat similar to that held by railroad employees. Their rights in admiralty remain, and they have long had the right of choosing common-law remedies when appropriate. Recent congressional action gives them also the choice of making claim under the compensation law of their State, in lieu of other procedure, if they choose to do so.

All the more important maritime States have compensation laws, so that most injured maritime workers are presumably able to seek redress under compensation laws if they desire; but the situation is far from clear or satisfactory.

Industrial or occupational diseases are specifically covered by the laws of but three States: California, Connecticut, and Wisconsin. In Massachusetts and North Dakota the term "injury" as used in the law is construed to cover occupational disease. The Federal statute is similarly construed. None of these laws enumerates the diseases

¹ See chart at end of this article.

which are to be compensated, the Connecticut law being applicable to the diseases due to "causes peculiar to the occupation, and which are not of a contagious, communicable or mental nature"; while in Wisconsin the act covers not only accidental injuries but also "all other injuries, including occupational diseases growing out of and incidental to the employment."

II.—Character of System Adopted.

A STATE fund exists in 17 States, being exclusive or monopolistic in eight and competitive in nine.¹ Where the fund is not exclusive, insurance may be carried by either private or mutual companies; in three States: Kentucky, Massachusetts and Texas, a mutual company was created by the law as a State agency; however, in but one of these (Kentucky) does the State take any part in the appointment of the directors of the company.

2. Payment of compensation is secured by obligatory insurance in 39 States, while in three no provision of this kind exists.¹ In no case does the State itself guarantee the payment of compensation or the solvency of the State funds; yet, as a matter of fact, the legislature of California appropriated a considerable sum to pay the benefits due workmen insured in a private company that became insolvent.

3. Where insurance is compulsory, the failure of the employer to insure subjects him to a fine, or leaves him liable to a suit for damages with the common-law defenses abrogated.

4. There is no State guaranty of any fund, strictly speaking. The laws provide methods of recoupment, so as to care for overdrawn accounts, by premium payments from the employers or groups of employers affected.

5. Security by compulsory insurance is so very general that there is little experience on which to base an estimate as to losses due to the lack of it. The question was recently asked of a number of compensation boards and commissions as to losses due to insolvency, etc., and the number of losses reported is very small, though there is known to be some.

6. Self-insurance is allowed in 31 States in which insurance is obligatory.¹ Employers wishing to avail themselves of this method must give satisfactory proof of their ability to make payments that may become due, and they also may be required to furnish security or make a deposit to cover their prospective liabilities. No form of contract is permitted which limits the responsibility of the employer or reduces the amount payable under the law.

7. No general statement can be made of the reasons why systems vary as they do in the 42 different States having compensation laws.

¹ See chart at end of this article.

The expression has been frequently used that the law of a given State should meet the peculiar industrial condition or stage of industrial development of that State. The relative influence of organized labor and organized employers has doubtless been effective in determining the stringency of the provisions adopted. The State fund, especially as an exclusive system, is naturally vigorously opposed by the stock companies, but in no case has it been abolished after original enactment, while in one State at least (Ohio) it has been advanced by amendment from a competitive to an exclusive system. The change is said to be due to the common opinion of employers and workers that the exclusion of private companies tended to economy and efficiency. A similar end is being sought in other States, but none of these has yet made the change.

8. Criticisms addressed to the existing system would probably in no case go to the principle involved, but only to some detail of administration, or to the amount of benefits. The tendency has been continuously to increase the amount of the awards and to reduce the waiting time, amendments along these lines being enacted practically each year. No form of industrial legislation has made the rapid progress achieved by compensation since the initial enactment of laws of this class, the present situation being the result of growth during a single decade.

III.—Comparison of Different Methods of Insurance.

THIS is one of the most difficult, because one of the most controverted, subjects included in any discussion of compensation legislation. Reports of State commissions in which State funds are discussed give some data, but more by way of a statement of the operations of the funds than any comparison with private insurance systems. The MONTHLY LABOR REVIEW for April, 1919 (pp. 210-216), gives a summary of the replies of a number of State officials to a series of questions on this subject. The address by Mr. Carl Hookstadt on "Tests of efficiency in workmen's compensation administration," published in the December, 1919, MONTHLY LABOR REVIEW, also gives matter of interest in this connection. The subject is also developed briefly in an address by Dr. Royal Meeker, Commissioner of Labor Statistics, on "Minimum requirements in compensation legislation." This appeared in the MONTHLY LABOR REVIEW for November, 1919. A most interesting and authoritative contribution to this discussion is an article, "An adventure in State insurance," in the December, 1919, issue of the American Economic Review, Princeton, N. J. This gives an account of the successful growth of the competitive State fund of California, written by Mr. A. J. Pillsbury, then chairman of the State Industrial Accident Commission.

A Massachusetts report for the year 1917 gives the general average loss cost per \$100 of pay roll as 62 cents for stock companies; and for mutuals, 50 cents.

In Montana, three forms of insurance are in practice: First, self-insurance; second, private insurance companies; third, State insurance. Reports for 62 employers with 24,649 employees show a loss cost, under the first plan, of approximately 75 cents for each \$100 of pay roll during the three years ending June 30, 1918; the system of self-insurance practically eliminates administrative expense. Under the second plan, for 915 employers with 11,000 employees the actual accident cost is quoted at \$1.04 per \$100 of pay roll, the total premium cost being practically \$3; while under the State fund system 1,017 employers with 14,060 employees paid 65 cents on each \$100 of pay roll as the actual accident cost, with a total premium cost of \$1.02. This report emphasizes the comparatively low cost of the State plan, considering the administration as well as other costs.

Administrative costs are again brought out in the report of the same State for the year ending July 1, 1919, which shows, for self-insurers a rate of accident cost of 75 cents per \$100 of pay roll, the total cost to the employer being of course the same. For company insurance the accident cost was 67 cents and the employers' cost \$2.25—considerable reduction from the 3 years previous; while in the State fund, the accident cost was 80 cents, and the total cost to the employer, \$1.

Montana is of course a State of relatively small population and of correspondingly limited industrial importance. The significance of the data given lies chiefly in their exact showing of relative costs. Of greater significance is the summary showing of experience under the law of New York, the most populous and the leading industrial State of the Union. An investigation of the systems of insurance in use in this State, which are the same as in Montana, shows the following results, self-insurers being left out of consideration in this comparison. State fund premiums are shown at the same rates as insurance companies, for comparative purposes.

LOSS AND EXPENSE EXPERIENCE, COMPENSATION INSURANCE IN NEW YORK, 1918.

Carrier.	Earned premiums.	Per cent of earned premiums.			
		Losses.	Expenses.	Losses and expenses.	Savings.
Stock insurance companies, nonparticipating....	\$22,534,589	51	36	87	13
Stock insurance companies, participating.....	1,198,072	44	17	61	39
Mutual insurance companies.....	4,580,722	44	20	64	36
State fund.....	3,982,678	41	6	47	53
Total.....	32,296,061	48	29	77	23

The investigator (Mr. Miles M. Dawson, F. A. S., F. I. A., consulting actuary) says of this:

Here the superior showing of the State fund is unobscured; its much lower expense makes the total net cost materially lower than in other insurance carriers.

Savings of nonparticipating companies (13 per cent) are profits and in nowise benefit the employers insured therein. In participating companies some portion of the 39 per cent of savings returns to insured employers as dividends, while in the case of mutuals 5 per cent goes to a catastrophe surplus and 31 per cent to dividends. Of the 53 per cent savings in the State fund, 14½ per cent are represented by reduced premium rates as compared with regular company rates, 5 per cent of the actual State fund rates go to a catastrophe surplus, while the remainder goes for the payment of dividends, thus saving to employers insured in the State fund 48¾ per cent of the earned premiums for the year, as compared with the full rates of insurance companies.

Taking the five years of operation of the fund, the saving to insurers is found to aggregate \$4,004,623, or 29 per cent of the total premiums computed at company rates. On this same basis, insurers in stock companies paid an unnecessary cost in excess of \$18,000,000 during the four and one-half years for which data are available; while at the same time beneficiaries would have received not less than \$5,700,000 more than they did, because of underpayments by insurance companies and self-insurers.

This authority regards "the grave undesirability of permitting self-insurance" as being fully demonstrated, and also "the wastefulness of insurance in insurance companies of the payment of compensation."

Another industrial State of the first rank, Ohio, has a State fund which is exclusive in its operation, insurance in stock companies or otherwise not being permitted. Of this it is said by a special investigator from outside the State:

The Ohio State fund, measured by the actual volume of benefits insured, has now become the largest carrier of compensation insurance in the United States. One or two private insurance companies, it is true, had a larger total of premium income in 1918, but 40 cents out of every dollar collected by these companies is absorbed by overhead expenses, whereas the whole income of the Ohio fund is devoted exclusively to the payment of compensation claims.

This fund is found by its investigators to be "highly solvent." It is, "and has at all times been, strong and solvent," while the report on the New York fund quoted from above speaks of that fund as "solvent and possessed of unimpaired reserves, at least equal in value to all liabilities, accrued or to accrue," with surplus for dividends, catastrophes, and fluctuations in experience.

The Pennsylvania State fund, like that of New York, is competitive. In the second annual report of this fund (1918) it is said that in the years 1916 and 1917 the State fund saved to its policyholders more than \$483,000 as against the costs that would have been incurred by insuring through the ordinary agencies. The saving for 1918 is estimated at more than \$450,000, while if all employers in the State carrying insurance at the time were insured in the State fund the savings effected would exceed \$2,500,000. "Absolute compensation protection with the best claim and inspection service" are offered by the State fund at a saving of from 15 to 25 per cent.

The Bureau of Labor Statistics is engaged in a rather extensive study of State funds, both exclusive and competitive, but no report is yet available. However, existing data show that in economy, fairness, promptness of payments, and general efficiency State funds are superior to any other form of insurance. This is indicated not only in the address by Commissioner Meeker above referred to, but also in his earlier address, "Lacks in workmen's compensation" (MONTHLY LABOR REVIEW, February, 1919). The various experts of the Bureau of Labor Statistics who have studied the question for the last 15 years have unanimously arrived at the same conclusion. It is impossible, however, to give at the present time as full an answer as is desirable.

IV.—Organization of State Funds.

THE administrative methods of each State fund are prescribed by the statute creating the fund. In the majority of cases a board or commission of three persons has charge of the fund as well as of the making of awards and the settlement of disputes. Notice of injury is received from the employer, and of claims from the employee. Investigations and reports, with special hearing where required, lead to the tentative determination of the amounts payable, subject to revision at such times and within such limits as the various laws provide.

The administrative board is purely a State agency, neither employer nor worker having any part as such in the management of the funds or the determination of its policies. Medical assistance is rendered in one State (Washington) under the supervision of local agencies in which there is representation of workmen and employers.

State funds do not employ agents or do advertising in the commercial sense. Of course, the reports of the commission are widely distributed, and the adjusters and inspectors of the office come in contact with employers generally, but there is no provision made for pushing business, such as is necessarily used by a commercial company.

Payments are made without the intervention of any other agency than the administration of the fund itself and the insured employers.

Therefore, the post office is used only as for any other matter deposited in the mails.

2. Practices as to methods of handling funds differ somewhat in the different States. However, a reserve is to be created and maintained adequate to care for any continuing liability, while in most of the States provision is also made for a catastrophe reserve. Annual reports as to the status of the funds are required; actuarial examinations are made from time to time, and the administrative board or commission is given authority to adjust premium rates or to regulate the number of calls for premiums so as to maintain an adequate reserve without the accumulation of excessive surpluses. Dividends may also be declared to avoid unnecessary accumulation of funds.

In three cases it was provided in the earlier acts that the employee should make some contribution to the State fund. These provisions have been gradually eliminated so that now a single State (Oregon) requires the workmen to make a contribution to the benefit funds, the amount being 1 cent for each day worked. In a few States the employee may be called upon to contribute to the medical aid fund but not to the fund for compensation.²

In a few States administrative expenses are borne in whole or in part by the State, but the tendency appears to be to make the system self-supporting. Reserves are required for continuing payments as well as for emergencies. Some laws establish rates on the basis of estimates submitted previously to their enactment, industries being classified in groups of approximately the same hazard. In other States the work of fixing rates is placed in the hands of the commission. The commission may also be charged with the duty of establishing risk classes, and the principle of merit rating is made use of to some extent.

Financial difficulties incident to the establishment of a new fund have been met in a number of cases by the advancement of a sum sufficient to enable the fund to begin work. Where a catastrophe has caused an overdraft on specific funds there has been gradual recoupment by the collection of premiums. This has occurred in but two instances, one in Washington, due to an explosion in a powder mill, and the other in West Virginia, where serious mine disasters led to heavy losses. Both these occurred early in the history of the funds involved, and in both States present solvency has been established.

No provision has been made for the relief of existing private insurance companies when an exclusive State fund has been established. In most cases the occasion for compensation insurance arose only contemporaneously with the creation of an exclusive State fund, so that no existing business, strictly speaking, was destroyed. Of

² Idaho, Montana, Nevada, Utah, and Washington.

course, accident insurance and employers' liability insurance were largely superseded by the establishment of the exclusive funds, but no compensatory or gradual reduction system has ever been adopted.

The establishment of a vigorous competitive State fund has, undoubtedly, resulted in the lowering of rates, though the number of such funds is as yet quite limited; strong mutual companies have had a similar effect in a few States.

It is of interest to notice that when the Canadian Provinces found it desirable to modify their existing compensation laws or to enact new ones, they investigated, through commissions, the workings and methods in use in some of the States of the Union. The result has been a strong commendation of the compulsory insurance system with an exclusive State fund as the insurance carrier. This has not been adopted in every Province, but the preponderance is strongly in favor of this method.

V.—Organization of Mutual Associations.

MUTUAL associations are found in various forms. As already referred to, the States of Kentucky, Massachusetts, and Texas maintain what might be called State mutual companies, officially recognized. As a rule, however, mutual companies are organized under general laws providing for the organization of such companies. A few States have specific provisions for mutual companies to carry compensation insurance. There are no separate provisions for particular employments, and so far as is known no provision is made for employee representation in the management of the associations. It is a common provision that business can be written only after a specified number of employers and employees are ready to be organized into a mutual association. The laws do not restrict their operation to single trades or districts. A summary of the provisions covering mutual insurance companies may be found in the Bureau's Bulletin No. 203, pages 290-296.

The laws contain a variety of provisions as to premiums, dividends, and reserves, and no single statement can be made covering these points. Reference to the summary noted above will indicate some of the methods in use. The States assume no responsibilities for the maintenance of funds of mutual associations other than is involved in official inspection, nor are employees privileged to contribute or to relieve the employer of his responsibility under the law.

VI.—State Regulation and Supervision.

PRIVATE insurance companies are formed only in accordance with statutory provisions of the State of domicile. They must also conform to the requirements of the laws of the various States in which they wish to transact business. Premium rates must, as a

rule, receive the approval either of the compensation board or of the insurance authorities of the various States.

Corresponding provisions relate to the organization of mutual associations, which are likewise subject to the scrutiny of the State superintendents of insurance.

2. Insurance departments exist in most States with power over companies transacting insurance business of whatever kind. They maintain a single State office, usually at the capital, and require reports at least annually, covering all financial transactions of all companies. They have also power of visitation and of requiring disclosures of all pertinent facts.

3. As to the cost of State supervision, insurance commissioners are salaried officials, but companies doing business in the various States are required to pay a license fee or tax, and also fees for audits and examinations of books and accounts. The practices of the States vary considerably, the fee going into the State treasury in some cases, and in others it goes to the inspector as payment for his services. Mutual and stock companies are on the same footing in this regard.

VII.—Cost of Compensation.

THE data on this point can be regarded only as tentative, the laws being of such recent enactment and the changes therein so frequent that no real basis of costs can be said to be yet determined.

The Pennsylvania Insurance Commission reported, in 1918, the pure premium costs of policies issued in 1916. This showed that for all industries the average was 63 cents per \$100 of pay roll; for all except coal mining, 48 cents; for anthracite mining, \$2.77; for bituminous mining, \$1.62; for building construction the rate was \$1.17; for iron and steel manufacturing, 86 cents; manufactured products of clay, 73 cents; chemicals, 78 cents; textiles, 17 cents; wood products, 57 cents, etc. These figures, of course, do not include the cost of administration, which varies with the type of insurance, being least with the self-insurer and greatest with stock companies.

The combined policy years 1916 and 1917 show an audited pay roll of \$2,715,747,000; earned premiums amounted to \$30,842,928, while the losses incurred were \$15,634,248. The average premium rate was \$1.14; the pure premium, 58 cents; and the loss ratio 51 per cent.

An illustration of the relation of costs to pay rolls and premiums may be taken from the report of the State fund of Montana. In 1918 private employers in the State fund had a pay roll of \$10,747,628, on which premiums amounting to \$157,639 were paid; \$52,512 were paid as total compensation benefits during the year. For the fiscal year ending June 30, 1919, there was a premium income of \$181,709. Of this 16 per cent went for temporary total disability, 8 per cent

for permanent partial disabilities, 8 per cent for fatal injuries, 3 per cent for medical and hospital benefits, and 0.8 per cent to undertakers. During the same time compensation payments amounted to \$68,708. Of this 44 per cent was for temporary total disability, 22 per cent for permanent partial disability, an equal amount for fatal injuries, 8 per cent to physicians and hospitals, and 2 per cent for burial.

The State fund of West Virginia was contributed to in 1917 by 2,644 employers, with a wage roll of \$125,220,220. The premium income was \$1,762,238, or at an average premium rate of \$1.41 per \$100 of wages. The losses during the year amounted to \$1,319,144, or \$1.05 per \$100 of wages and 75 cents per dollar of premium income. The administrative expense was \$80,732, or \$4.58 per \$100 of premium income. Summarizing the experience of four years' operations, the average premium rate was \$1.25 per \$100 of wages, and the average losses, \$1.17; losses amounted to 94 per cent of the premium income. Administrative expense averaged \$5.05 on each \$100 of premium income.

The benefit provisions of the various acts differ considerably so that to make a comparison between them requires a comparison of a number of factors. The Massachusetts report for the year ending June 30, 1917, shows the loss experience of that State for a period of five years on the basis of the average cost per benefit case for the different kinds of payments. This information is presented in tabular form as follows:

AVERAGE COST PER BENEFIT CASE IN MASSACHUSETTS, YEAR ENDING JUNE 30, 1917.

Type of payment.	First year.	Second year.	Third year.	Fourth year.	Fifth year.
Medical.....	\$11.04	\$9.79	\$9.36	\$9.32	\$10.09
Fatal.....	1,368.65	1,780.63	2,970.21	2,603.06	2,630.74
Nonfatal.....	58.65	87.27	91.65	85.44	69.60
Total.....	40.53	43.58	43.38	43.56	38.98

It is evident that no uniformity has been reached in the five years' experience above set forth. The report offers but one explanation for some of the rather marked variations, which is that "it may possibly be that industrial conditions are in part responsible."

Various lines of approach to the problem of costs are suggested by the different kinds of data above reproduced. Reference may also be had to data given under III (page 21), for some suggestive figures, but the subject has not yet received the attention that its importance warrants. This is excused in the minds of some by saying that the cost of compensation is really but the cost of industrial injuries, and the community has borne this in the most burdensome and uneconomical and unjust way hitherto; so that the question is only one of incidence, newly adjusted by the new legislation;

but the actual amounts will doubtless be brought into fuller consideration with the growth of an intelligent appreciation of the value of data showing the importance of accident prevention as well as of relief.

It is difficult to say whether or not costs have risen in recent years, in view of the comparatively brief experience already noted. The pressure for production and the influx of unskilled workers into industry had a tendency to increase the accident rate in 1917 and 1918, but the actual influence of this fact on insurance costs is not yet known.

VIII.—Benefits.

IT WILL be necessary to advert to the laws themselves or the Bureau's analytic Bulletin No. 240 for an answer to the question as to the amount of benefits paid. It is in most cases a percentage of the wages earned at the time, ranging from 50 to 66 $\frac{2}{3}$. Only actual dependents receive compensation, and, as a rule, in periodical payments rather than lump sums. Supervision of the expenditures of lump sums is very slightly practiced and that in a rather unofficial way.

2. Disability benefits begin at the expiration of a waiting time which varies from three to fourteen days under different laws. Usually the same percentage of wages is paid regardless of the period of the disability.

3. A few laws reduce the benefits where there is marked fault on the part of the workman and increase them where the employer is guilty of negligence in a marked degree. However, it is the common rule that the fixed schedule is paid in all cases.

4. A majority of the laws contain fixed schedules for specified injuries, chiefly dismemberments. In California and Nevada the laws take cognizance of the age and occupation of the injured person; while in a number of other States, if the employee is a minor or a learner, the fact that an increase in the earning capacity is normally to be expected is to be considered.

5. Relatively few of the laws make disfigurement apart from disabling injuries a basis of awards. Where the provision exists, there is usually a maximum limit fixed by the law, the actual amount being subject to determination by the administrative commission.

6. Medical and surgical aid are included at the present time in practically all laws, though omitted from some in their first enactment.¹ Where it is required, it is to be given in all circumstances immediately on the happening of the injury, but may be limited to brief periods as in some laws, or continued until recovery or a final determination of the status of the injured person. The laws vary as to the methods of administration, the more common provision being

¹ See chart at end of this article.

that the employer shall furnish the physician. In some States the right of the employee to make the selection is reserved: while in Washington, local medical aid boards are charged with the administration of this form of relief.

IX.—Old and Infirm Workers.

NO CONCLUSIVE figures are available on this subject. Proposals to permit workers of these classes to contract out of the law are generally disapproved. In most States special provision is made to limit the liability of the employers taking on partially disabled workers, as by the loss of one hand or one eye, so that a second injury will not entail upon the current employer a liability as for total disability.

X.—Relation of Accident Insurance with Any Other Forms of Insurance.

ACCIDENT insurance stands alone so far as being correlated with sickness or invalidity insurance is concerned. Some laws authorize the formation of relief associations to which employees may contribute, added benefits in excess of those required by the compensation laws being payable. No State of the Union has thus far enacted legislation providing for sickness or invalidity insurance.

XI.—Malingering.

SO FAR as reports indicate, malingering can not be regarded as at all prevalent. Cases are, of course, known, and it is a part of the work of the administrative boards to keep in touch with injured workmen, chiefly through medical channels, so as to prevent the practice. This point is discussed on page 289 of the MONTHLY LABOR REVIEW for November, 1919, where the opinion of Commissioner Meeker is expressed after a very general consideration of the subject.

XII.—Accident Prevention in Connection with Workmen's Compensation.

LACK of thorough statistical reporting makes it impossible to decide what effect workmen's compensation laws have had on the number of accidents. It is the general impression that the tendency is to lead to a reduction of accidents, especially where mutual companies insure or where there is merit rating.

A number of the laws contain special provisions with regard to safety regulations, either actually prescribing such regulations or penalizing persons who disregard existing regulations. In some States the administration of compensation laws is in the hands of the same department or commission that has charge of inspection and safety;

in others there are various degrees of correlation between such administrative board and the labor commissioner or inspection department of the State.

XIII.—The Determination of Claims.

THERE is a wide variety in the modes and degrees of supervision of direct settlements by administrative authorities. In the States having the better practice, and they constitute a considerable number of the total, settlements are open to review by the commission, and are not to be considered as binding or final until approved. Most States have special administrative commissions; in a very few the power of awards and adjustment is vested in the courts, usually in summary proceedings.¹ In a few cases, special arbitration boards or tribunals are to be selected for the individual case, a single State official constituting the permanent factor of administration. In many cases the board or tribunal has the power to hold hearings and procure evidence; its findings are usually binding so far as facts are concerned, though appeals may be taken on matters of law. The status of administrative boards has been considerably discussed and reference may be made to "Exercise of judicial power" in Bulletin No. 203 (pp. 180-182).

The medical aspect of the case is dealt with by the same tribunal and at the same time as other aspects. Some of the State boards have permanent medical advisers, while others depend on designated physicians and the report of the practitioner in the case.

Little organized work is done in the way of furnishing expert assistance to claimants. The view has been expressed that it is a proper function of the State to enable inexpert or illiterate claimants to secure their rights under the laws, but so far as is known, there has been no general adoption of this view. The expense incurred in the settlement of disputes is borne by the parties litigant. Some laws limit the amount that an attorney may charge, but no State provides for any additional sum to meet costs. Some require filing or recording to be done by court officials, free of charge. Delay in the payment of awards subjects the delinquent party to a penalty in a number of States; others allow interest on payments withheld during an appeal if the award on the appeal is approved. It is impossible to give any average time elapsing between the date of claim and the payment of benefits. Few offices are allowed adequate administrative force such as would be necessary for prompt and accurate adjustments.

The extent of litigation is difficult to discuss. While the number of appeals and court trials prove positively that the laws have not

¹ See chart at end of this article.

succeeded in entirely doing away with action at law, the number of cases settled without litigation is greatly in excess of those in which it is resorted to. For instance, the Montana commission reports deciding 6,000 disputes, out of a much larger number of claims referred to it for determination, without a single appeal being taken to a law tribunal.

XIV.—Revision of Existing Law.

CONSTANT changes are being made by way of amendments in the laws of the various States. These relate not to the principle involved, but to administrative details and to degrees of liberality. For instance, it was true only quite recently that a majority of the laws provided as benefits 50 per cent of the wages. Now more than half pay 60, 65, or 66½ per cent. A waiting period of two weeks or more was embodied in a majority of the earlier laws, but now this has been reduced, in a majority of the States, to periods of less than two weeks; 21 States fix seven days as the waiting period. The fear that compensation laws would levy an intolerable burden on industry has practically disappeared. It has become more generally recognized that the burden of the individual injured is a reality, and that the mere transference of it from the unassisted worker with no capacity to shift the burden, to the responsible industry as represented by the employer, with means of distribution of costs in his hands, was not in any sense an increasing of the burden but rather the placing of it where it properly belonged. This fact is not yet recognized in all jurisdictions, or by all parties in interest; and the limitations on persons covered, on medical benefits, and on periods of payment in case of death or total disability, yet call for persistent and intelligent action to secure adequate compensation laws. Organized labor is naturally most able to express itself in behalf of liberality, and many of the more enlightened employers are ready to give frank consideration to demands for more liberal provisions.

XV.—Voluntary Insurance.

THE laws of a number of States absolutely exclude certain classes of labor, those notably being domestic and farm labor. In a number of States in which hazardous employments are designated as covered by the laws, permission is given for voluntary choice by employers and employees in other industries to accept the terms of the law. Some consideration is being given to the inclusion also of independent workers, while employers in small industries are already given permission to come under the provisions of the laws in a few States.

INDUSTRIAL RELATIONS.

Report of the President's Industrial Conference.

THE Industrial Conference called by the President, which was convened on December 1, 1919, made public a preliminary report on December 29, setting forth a tentative plan of machinery to adjust disputes by conference, conciliation, inquiry, and arbitration. The purpose in publishing this preliminary report, which was reprinted in the MONTHLY LABOR REVIEW for January, 1920 (pp. 60-68), was to obtain, as early as possible, constructive criticism of the proposed plan while the conference was engaged in its further development.

On March 6, 1920, the conference issued its final report, setting forth a program to combat industrial unrest. This report (1) modifies the tentative plan for the adjustment of disputes, (2) suggests the development of employee representation as a method of preventing disputes, and (3) makes recommendations as to methods of dealing with certain problems affecting the employment relationship.

The conference declares itself in favor of the policy of collective bargaining and provides for the unrestricted selection of representatives by employees, but leaves the question of an open or closed shop to be settled in each factory or plant as local conditions determine.

The guiding thought of the conference has been that the right relationship between employer and employee can be best promoted by the deliberate organization of that relationship. That organization should begin with the plant itself. Its object should be to organize unity of interest and thus to diminish the area of conflict, and supply by organized cooperation between employers and employees the advantages of that human relationship that existed between them when industries were smaller. Such organization should provide for the joint action of managers and employees in dealing with their common interests. It should emphasize the responsibility of managers to know men at least as intimately as they know materials, and the right and duty of employees to have a knowledge of the industry, its processes and policies. Employees need to understand their relation to the joint endeavor so that they may once more have a creative interest in their work.

Plan for the Settlement of Disputes.

THE modified plan for the settlement of disputes limits the field of arbitration and, by making machinery available for collective bargaining, enlarges the field of voluntary settlement by agreement. The plan has been extended to include the service of public employees and to cover disputes affecting public utilities other than steam railroads.

The plan involves no penalties other than those imposed by public opinion. It does not impose compulsory arbitration. It does not deny the right to strike. It does not submit to arbitration the policy of the "closed" or "open" shop.

The plan for adjustment consists of a system, nation-wide in scope, with a national industrial board, local regional conferences, and boards of inquiry whose functions are defined by geographical rather than industrial limits. In brief, the plan is as follows:

The Regional Adjustment Conference.

The parties to the dispute may voluntarily submit their differences for settlement to a board, known as a Regional Adjustment Conference. This board is to consist of four representatives selected by the parties in accordance with rules laid down by the National Industrial Board for the purpose of insuring prompt and unrestricted choice of such representatives; and four others from the industry involved in the dispute, two of whom are to be chosen from a panel of 12 representatives of employers and two from a panel of 12 representatives of employees. These panels of employers and employees for each region shall be prepared by the Secretary of Commerce and the Secretary of Labor, respectively, after conference with the employers and employees, respectively, of the regions. These panels are to be approved by the President. In case either side objects to the representatives of the other on the ground that they are not in fact representative, the chairman may pass upon such objection, or he may call in some competent person to do so. If the chairman is in doubt as to whether the representatives objected to are in fact representative, he may require that formal action be taken by the employer to select, and properly to certify to the selection of his representatives; and likewise, unless otherwise provided by the National Industrial Board, he may require the employees to elect their representatives by secret ballot, under the direction of some impartial person, designated by the chairman. The board is to be presided over by a regional chairman, representing the public interest, and appointed by the President, who is to act as conciliator. If a unanimous agreement is reached, it results in a collective bargain having the same force as a trade agreement. If the conference fails to agree unanimously, the matter goes, with certain restrictions, under the agreement of submission, to the National Industrial Board, unless the parties prefer the decision of an umpire selected by them. The decision of the umpire is to have the same effect as the unanimous agreement of the Regional Adjustment Conference. The voluntary submission to a Regional Adjustment Conference carries with it an agreement by both parties that there shall be no interference with production pending the processes of adjustment. The Regional conference is to obtain its facts through the voluntary action of parties to the dispute.

The Regional Board of Inquiry.

If the parties, or either of them, refuse voluntarily to submit the dispute to the agencies provided by the plan of adjustment, a Regional Board of Inquiry is to be formed by the regional chairman, consisting of two employers chosen from the top of the employers' panel for the industry concerned and two employees from the top of the employees' panel for the craft concerned, none of whom are parties to the dispute. This board has the right, under proper safeguards, to subpoena witnesses and records and the duty to publish its findings as a guide to public opinion. Either of the parties at conflict may join the board of inquiry on giving an undertaking that, so far as its side is concerned, it will agree to submit its contention to a Regional Adjustment Conference, and, if both join, a Regional Adjustment Conference is automatically created.

The National Industrial Board.

The National Industrial Board, with headquarters at Washington, is to have supervisory power over the working of the plan. The board is to be composed of nine members appointed by the President and confirmed by the Senate. Three of the members are to be chosen from representatives of industrial employers, three from representatives of industrial employees, and three are to represent the general public. One of the latter is to be selected by the President as chairman. All are to be selected without regard to political affiliations.

Public Utilities and Public Employees.

The plan is applicable also to public utilities, but in such cases the Government agency, having power to regulate the service, has two representatives in the Adjustment Conference. Provision is made for prompt report of its findings to the rate regulating body.

The conference makes no recommendations for a plan to cover steam railroads and other carriers, for which legislation has recently been enacted by Congress.¹

The plan with substantial modifications is also applicable to public employees. In this case the Regional Adjustment Conference is to consist of two representatives from the legislative branch of the Government authorized by law to make appropriations, two representatives from that branch or department of the Government which is in the position of employer, two representatives from the employees in the class of public service in which the question arises, and two members to be selected by the representatives of the employees from the first 12 names on the general panel.

¹ The labor provisions of the new transportation act are printed on pages 53 to 57 in this issue of the MONTHLY LABOR REVIEW.

A Regional Adjustment Conference is to be convened by the chairman on the request of the administrative head of any department of the Government standing in the relation of employer or on the request of such a substantial number of the employees as to satisfy the chairman that the question is of sufficient importance to justify the convening of a Regional Adjustment Conference.

If the Regional Adjustment Conference reaches an agreement, its report is to take the form of a recommendation to the appropriate legislative body as a basis for appropriations. If the conference does not reach an agreement, no report is to be made unless the legislative body requests such report.

In the case of public employees there is to be no board of inquiry, but all material facts and information are to be made available to the Regional Adjustment Conference. There is to be no appeal to the National Industrial Board and no reference to an umpire.

Findings of any adjustment machinery in the case of public employees must necessarily have the force merely of recommendations to the Government agency having power to fix wages, hours, and working conditions of the employees concerned. As a matter of principle, the Government is not in a position to permit its relations with its employees to be fixed by arbitration. The plan as modified for public employees therefore avoids arbitration.

Prevention of Disputes.

THE definitely formulated industrial disputes adjustment plan proposed by the Conference is a method for settling industrial quarrels after they arise. It is not intended to prevent the germination of disputes. Prevention of the quarrel, in the opinion of the Conference, is, however, worth more than cure. The Conference suggests, as a suitable means of prevention, the further application and development of the principle of employee representation.

The shop committee idea is recommended as being admirably calculated to minimize the serious results of that loss of personal contact between employer and employee which is an inevitable result of modern industrial organization. Employee representation will provide, the Conference believes, "an established channel of expression and an opportunity for responsible consultation on matters which affect them [the employees] in their relations with their employers and their work." It will not only better enable the employee to advance his own interests but will make him more definitely conscious of his own responsibility. It provides the machinery which is necessary (whether the establishment is unionized or not) for adequate discussion and settlement of purely local, establishment problems.

Employee representation, in the opinion of the Conference, "must not be considered solely as a device for settling grievances. It can find success only if it also embodies cooperation in the problem of production. Whatever subjects the representatives come to feel as having a relation to their work, and their effectiveness as members of the plan, may come within the field of committee consideration." The Conference remarks upon the necessity for absolute freedom in the selection of representatives and for frequent and regular meetings of employee and management representatives. "All employees," in the judgment of the Conference, "must feel absolutely convinced that the management will not discriminate against them in any way because of any activities in connection with shop committees."

The Conference believes that the opposition to the employee representation idea which has manifested itself among large employers "who still adhere to the theory that labor is a commodity" is "steadily disappearing" and hopes that it will entirely vanish. The other source of opposition is seen in those trade-union leaders who "regard shop representation as a subtle weapon directed against the union." The Conference suggests that this idea "is apparently based on the fear that it may be used by some employers to undermine the unions." This attitude the Conference believes to be "based on a misconception of the possible and desirable relations between the union and the shop committee. This relation is a complementary and not a mutually exclusive one. In many plants the trade-union and the shop committee are functioning harmoniously. In some establishments the men are unionized, and the shop committees are composed of union men. In others, some men belong to the trade-union, while all belong to the shop organization."

Employee representation is by no means suggested as a panacea. The Conference realizes that it "offers no royal road to industrial peace. It is only a means whereby sincerity of purpose, frank dealing, and the establishment of common interests may bring mutual advantage."

Problems Affecting Employment Relationship.

Collective Bargaining.

THE Conference balances the "right to bargain collectively" against "the right to refuse to bargain collectively," and asserts that "as abstract rights both undoubtedly exist." As a group of public men, however, they favor the acceptance by the employer of the policy of bargaining collectively, having reliance upon good faith for the enforcement of the bargain. The declaration of the Conference in favor of the policy of collective bargaining is as follows:

The Conference is in favor of the policy of collective bargaining. It sees in a frank acceptance of this principle the most helpful approach to industrial peace. It believes

that the great body of the employers of the country accept this principle. The difference of opinion appears in regard to the method of representation. In the plan proposed by the Conference for the adjustment of disputes provision is made for the unrestricted selection of representatives by employees, and at the same time provision is also made to insure that the representatives of employees in fact represent the majority of the employees, in order that they may be able to bind them in good faith.

Hours of Labor.

The Conference recommends neither the 8-hour day nor the 48-hour week, but it does state "that a schedule of hours substantially less than the 48-hour standard is not at this time desirable except in industries where a scientific study of the problem indicates that such a reduction is necessary for the protection of the health and safety of the workers and is in the public interest."

Three recommendations are made: (1) That hours of work should be considered from the point of view of the welfare of the workers and of the efficient utilization of the country's resources over a long period of time; (2) that study should be made in each industry, preferably by the industry but in its default by the appropriate government agency, of the problem of industrial fatigue in relation to production and to the health of the workers; and (3) that hours of labor schedules should be arranged on a weekly basis and overtime be permitted only in case of temporary necessity.

Women and Children in Industry.

The Conference recommends that women doing work equal in quantity and in quality to that of men working under similar conditions should receive equal pay. In respect to child labor it urges all States not having adequate legislation with reference to child labor and compulsory education to "give these topics prompt and sympathetic consideration."

Housing.

Housing is declared by the Conference to be primarily a community problem. Home ownership by the workers is urged, "with protection against the dangers of real estate speculation and exploitation." The function of the State and Federal Governments is to be largely one of study and investigation of housing problems, the State further concerning itself with the enactment of proper building and housing codes.

Wages, Profit Sharing, and Thrift.

The Conference recommends the establishment of wages "on a basis of justice to employees" and asserts its belief that profit sharing "properly adapted to the character of the individual business and carried out in a spirit of genuine mutuality may often better industrial relations."

The Conference believes that the alternative to insurance against sickness and old age lies in a wage adequate to cover these items, and suggests that the Federal Government should conduct a careful, authoritative investigation of the whole subject. "It feels that such investigation could well include such items as the possibility of converting the great multitude of small Liberty loan investments in the country (with all the attendant difficulty of collecting small amounts of interest) into some form of old-age annuities."

Agriculture and the Cost of Living.

The Conference asserts its belief that agricultural production is profoundly influenced by the competitive conditions between the factory and the farm, as to wages, hours, and conditions of work, and feels that "it would be a disaster to exaggerate industrial development at the cost of agriculture."

Cooperation among consumers in the purchase of their supplies and among producers in the marketing of their products is suggested, which in the opinion of the Conference will tend to stabilize both demand and supply and offer legitimate opportunity for reduction in the price margin between producer and consumer.

Since changes in the cost of living, and the readjustments they make necessary, must continue to be significant, it is vitally important that the Government maintain and even extend its machinery for investigating and reporting upon this phase of the industrial situation. * * * The Conference hopes that adequate appropriations for the continuance of effective investigation work and the publication of results may not be lacking.

Public Employees.

The Conference states its belief that, although utmost liberty of action should be accorded public employees in the matter of their association for the advancement of their common interests, policemen, firemen, and others whose duties relate to the administration of justice and the preservation of life and property should not be allowed to affiliate with organizations which authorize the strike. The Conference was unable to agree upon any recommendation as to the propriety of the affiliation of other classes of public employees with such organizations.

Employment and Unemployment.

The Conference urges "an immediate and thorough study of the problem [of unemployment] by individual industries so that analysis of the conditions in each may suggest appropriate measures of amelioration. Otherwise the country will be confronted with the demand for legislation still on trial in those countries which have adopted it, and will be without the information necessary to a wise choice of remedies."

The Conference recommends establishing a "system of employment exchanges, municipal, State, and Federal, which shall in effect create a national employment service."

Conclusion.

IN CONCLUSION the report states:

In presenting these recommendations the Conference desires to emphasize that they are not merely designed to tide over a troublesome period of economic readjustment. Many of the evils which we have pointed out were in existence before the war, and will remain in existence, if steps are not taken to remedy them. The machinery of cooperation and adjustment which we recommend we believe to have permanent value as an agency of industrial progress. At the same time, it should be borne in mind that to-day, when the sense of the magnitude and danger of social unrest is still acutely upon us, when we have not yet reverted to settled habits of thought and action, when our economic life is still in a state of readjustment, it may be possible to establish ideals and set up machinery which the inertia of a later day may defeat. Not with any feeling of panic, not with any hysterical haste, but sanely and sensibly we urge that these reforms be put into effect. And we do so with the belief that they will not only contribute largely toward the elimination of the causes of industrial strife, but that they will make for the introduction, in American industry, of those democratic principles which constitute the most precious heritage of the American citizen.

The report is signed as follows:

William B. Wilson, Chairman.

Herbert Hoover, Vice Chairman.

Martin H. Glynn.

Thomas W. Gregory.

Richard Hooker.

Stanley King.

Samuel W. McCall.

Henry M. Robinson.

Julius Rosenwald.

George T. Slade.

Oscar S. Straus.

Henry C. Stuart.

William O. Thompson.

Frank W. Taussig.

Henry J. Waters.

George W. Wickersham.

Owen D. Young.

Willard E. Hotchkiss,

Henry R. Seager,

Executive Secretaries.

Report of the United States Bituminous Coal Commission.

THE strike of the bituminous coal miners which occurred during November, 1919 (see MONTHLY LABOR REVIEW for December, 1919, pp. 61-78), was brought to an end when the miners agreed to accept the President's proposal that they accept the 14 per cent wage increase fixed by the fuel administrator and his offer to appoint a tribunal to consider the whole matter and review the reasonableness both of the wages at which miners start work and of the Government prices for coal. This commission was appointed on

December 19, 1919, and was composed of Henry M. Robinson, representing the public, afterward elected chairman; Rembrandt Peale, representing the operators; and John P. White, the miners. The majority report, dated March 10, 1920, and signed by the chairman and Mr. Peale, has recently been accepted by the President as the report of the commission. A minority report by Mr. White is made a part of the general report.

The Majority Report of the Commission.

AT THE first hearing, January 12, 1920, an agreement proposing to submit the controversial matters to the commission and to abide by its awards was reached between Mr. John L. Lewis, president of the United Mine Workers of America, and the operators in all the districts except the Southern Appalachian Coal Operators' Association; Alabama Coal Operators' Association; Colorado Fuel and Iron Co.; Operators' Association of Western Kentucky; New River Field of West Virginia; Georges Creek Coal Operators Association of Maryland. Statements from these operators' submitted to the commission showed that existing conditions peculiar to their particular industries prevented their taking part in the deliberations. All the operators, however, emphasized their legal inability to agree to fixed prices, and this matter was therefore not considered in the majority report.

Procedure.

Since the wages of the central competitive field consisting of the States of Illinois, Indiana, Ohio, and western Pennsylvania, have for many years been used as the basis for wages and agreements in outlying districts, the commission adopted the following method of securing necessary information regarding the industry. First, it heard the statements and demands of the miners and the operators of this field, respectively; then those of the miners and operators from other districts, and finally, in order to ascertain actual conditions in regard to the stability and distribution of the coal supply throughout the country, the statements of consumers generally.

Demands of Miners and Counterclaims of Operators.

The position of the miners as presented by President John L. Lewis, of the United Mine Workers of America, was as follows:

1. That there be a 60 per cent increase upon all classifications by day labor, tonnage, yardage, and day work in the central competitive field. That, of course, carries with it that the basis of understanding reached in the central competitive field on the part of the mine workers would be satisfactory in all outlying coal-producing districts.
2. That a six-hour day, five days per week, be established.

3. That the day labor be paid time and a half for overtime and double time for Sundays and holidays.
4. That pay days shall be upon a weekly basis.
5. That the double shift of work on coal for commercial tonnage be abolished.
6. That the automatic penalty clause be abolished.
7. That the internal differences not covered by interstate joint agreement shall be referred back to the respective districts for adjustment.
8. That any contract negotiated be effective from and after November 1, 1919, to run for a period of two years from that date.

Presenting their counterclaims, the operators asked:

1. That the present system of collecting dues and initiation fees for the mine workers and enforcing the payments thereof by deductions from their earnings through the officers of the operators be abolished.
2. That the commission fix an equitable method for dealing with house rent charged mine workers and the price charged the miners for domestic coal.
3. That the commission recommend to the Congress of the United States the enactment of legislation requiring associations of employees, which make contracts of employment with employers, to take such action as will make them legally responsible for the fulfillment of the contracts so entered into.
4. That the national officers of the United Mine Workers of America and the national organization being parties to the making of the contract be required to assume responsibility for enforcing the terms of such contracts in the various districts, notwithstanding the present limitations in the constitution of the United Mine Workers of America.
5. That the contract shall provide that time clocks or time devices may be installed at mines and that the miners and inside day men be required to register when they enter or leave the mines and that the outside day force be required to register when they arrive at or leave the mines. All men refusing to comply with such requirements to be subject to discharge.
6. That the commission in its award provide for the introduction of devices or machinery which may serve to reduce the cost of coal and consequently the cost to the public for which there is no scale of wages in the then existing contract.
7. That whatever contract the commission works out or recommends should expire on the 31st of March, 1922; that contracts should expire in the spring and should stand for a two-year period.

The Award.

The provisions of the award may be summarized as follows:

1. Unless otherwise ordered the terms and conditions of the Washington agreement of October 6, 1917, shall continue.
2. The 14 per cent increase in wages fixed by the Fuel Administration is eliminated on March 31, and replaced by this award (which is on a 27 per cent basis).
3. The agreements drafted under this award are to take effect April 1, 1920, and continue until March 31, 1922.
4. The mining prices for mining mine-run coal, pick and machine, are advanced 24 cents.
5. All day labor and monthly men are advanced a dollar a day, except trappers and other boys, who are advanced 53 cents a day.
6. All rates for yardage, dead work, and room turning are advanced 20 per cent.

7. The fulfillment of all joint and district agreements are to be guaranteed by the officers of the international organization.

8. The eight-hour day is retained.

9. The practice of car pushing stands, but with recommendations for careful consideration of ways and means for the introduction of ameliorating practices.

10. Rules are set up under which new machinery can be introduced in the mines and thoroughly tested.

11. A commission is set up for the central competitive field to handle questions of differentials in rate and certain other matters.

12. If the recommendations of the President's Industrial Conference are adopted in regard to industrial tribunals and boards of inquiry, this machinery is to be put into use in the coal industry. Otherwise a special board is to be set up.

13. Explosives are to be furnished miners at cost, cost to include handling, transportation, and insurance.

14. House coal is to be furnished to the miners at the tippie at the price they were paying on October 31, 1919, plus the average percentage allowed as an increase on the wage scale, i. e., 27 per cent—the miners to pay for delivery at cost.

15. Charges for blacksmithing are not to exceed three-quarters of 1 per cent of the miners' gross earnings.

16. Special boards are to be set up for the Kanawha, Paint Creek, and Cabin Creek fields; for District No. 12, Illinois, including Assumption and Decatur, Ill.; also for the State of Washington; each commission to handle specific local conditions.

Summary of Recommendations.

The report recommends:

1. That an Executive order be issued instructing departments and Federal agencies to buy and store the winter's supply of coal before July 1 of each year.

2. That the Council of National Defense assume the duty of obtaining the support of the general public for coal storage.

3. That an Executive memorandum be issued to the Interstate Commerce Commission, to the end that the commission may aid in the solution of the transportation problems outlined, with particular attention to the question of seasonal freight rates, car supply, and car distribution, as well as the problem of railway coal purchase for storage.

4. That the governors of the various States be asked to issue executive orders to State institutions and departments for the purchase and storage of winter coal during the summer months.

5. That State railway and public utility corporations use their influence with the various utility commissions to induce the pur-

chase and storage of coal by those corporations, reflecting, if necessary, the cost of such storage in the rates.

6. That a copy of this report go to the railroads to the end that they may cooperate in regard to coal storage, car construction and distribution, and the reduction to a minimum of the practice of commandeering coal.

7. That a copy of this report be transmitted to the Federal Reserve Board, to the end that Federal reserve banks may favor, as eligible for rediscount, paper drawn against coal in storage.

8. That the Interstate Commerce Commission, State railway and public utility commissions within their jurisdictions issue, where lawful, rules controlling car distribution among mines, to the end that no particular mine or mines may be permitted to obtain, through a practice of car assignment and car guaranties, preferential car service.

9. That the practice whereby purchasing agents of carriers can use company control over car supply to force down the price of railway fuel be abolished.

10. That operators avoid the use for railroads of coal whose properties make it more valuable for other purposes.

11. That camp and housing conditions be improved.

12. That the good offices of the miners' international organization be exercised to maintain their expressed position favoring the introduction of labor-saving devices and machinery.

13. That the making of advances on miners' pay be discouraged in every way, but if made, that they be made without discount, either directly or indirectly.

Wages.

Among the questions bearing upon numerous phases of the industry dealt with in the report those of wages and irregularity of employment assume the largest proportions.

In deciding to substitute a 27 per cent increase in wages for the 14 per cent fixed by Mr. Garfield, the former fuel administrator, the commission states that it was guided by the principle that "every industry must support its workers in accordance with the American standard of living"; moreover, that in a consideration of this principle it took into account the increased cost of living as shown by estimates submitted by the operators and by those shown in late official reports of the United States Bureau of Labor Statistics, increases paid workers in other industries, and various other factors.

This percentage of increase was based upon percentages reached for the different classes of work and of workers in the industry estimated on a tonnage basis.

The increase was apportioned among the different bodies of workers and classes of workers as indicated in the award, and applied to the

rates paid on October 31, 1919. The report estimates that on this basis the average increase to tonnage workers will be 31 per cent over that in 1919, and for day men it will amount to an average increase of 20 per cent. While there seems to be an apparent inequality in such an apportionment, the commission considers it a fair one, since under the award of October 6, 1919, the day men received a rate considerably in excess of the advance given to the tonnage workers.

It is estimated that the 27 per cent increase will amount to an increase in wages of approximately \$200,000,000 above what they were October 31, 1919, and the question of vital interest to the consumer is whether or not this added expense will ultimately be passed on to the public. In the opinion of the commission this depends upon competitive conditions, but it offers this hope: "We estimate that the carrying out of other provisions of our findings will save the general public more than the cost of the additional wages. It is to be expected that when all Government regulations are withdrawn and a competitive market for coal is reestablished, the over-expansion of the industry will not permit the operators to add to the price of coal all the increased compensation granted to the miners."

The contention was made by the operators who submitted figures to illustrate their case that often the miners do not avail themselves of all opportunity for work and that miners who work three-fourths of the available time earn sufficient wages. These figures, the report states, were found defective in two respects: (1) No allowance is made for turnover; (2) conditions in the mines resulting from the nature of the industry may limit the possibility of employment even though the mine is open. The commission found, however, even after all allowances had been made, a margin of unemployment directly attributable to the miners themselves.

In view of the generally accepted opinion regarding the relation which the increased wages paid for labor bears to a rise in the price of coal, the commission finds that—

We have evidence that the share of labor in the total price paid by the public for coal was greater in 1916 and in 1917 than in 1918 for most of the important producing districts. Hence the advance granted to labor by this commission will tend to reestablish the prewar distribution of each dollar paid for coal as between capital and labor.

The increase will thus in no way be a further step in the circular ladder of more wages—higher prices—increase in the cost of living—still more wages.

Irregularity of Mining Operations.

The irregularity of mining operations resulting as it does in an intermittency of working-days is a primary cause of much of the unrest prevailing in the industry and of the high prices of coal.

This irregularity the commission attributes to two principal causes: (1) The seasonal character of the market; (2) the inadequacy and

irregularity of car supply. Statistics submitted in support of these statements show that in 1918 when the demand for coal was at its maximum the principal cause of loss of time was car shortage which amounted to 49 per cent, while in 1919, after the war demand was past, "no market" was responsible for 50 per cent of the idle time. Labor shortage and strikes accounted for about one-fourth of the lost time in each year and mine disability for 14 per cent in 1918 and 6 per cent in 1919.

The seasonal character of the demand which forces the operators to keep a reserve force large enough to meet the peak of the demand operates to produce unemployment in seasons of "no market."

For these reasons the commission strongly urges the consuming public on the one hand and the carriers on the other to aid in stabilizing the industry and in regulating the irregularity of the market, the public by purchasing and storing its coal in the spring and summer; the carriers by arranging to furnish all possible equipment when necessary and without discrimination.

The fact is brought out that for many years the railroads, which consume about 30 per cent of the total coal production, have, when necessary, been in the habit of commandeering coal consigned to other consumers, and that public utilities have also followed this practice to some extent.

The commission has therefore requested the executives of the larger systems to move coal in excess of their needs during months of low movement to consumption terminals, so as to accumulate a three months' supply by winter and to have 20 or 30 days' supply on hand in the spring. The economy thus practiced will, it is thought, offset to a large extent the increased cost of storage. Public utilities and the steel industry, the next largest consumers, are urged to increase their storage of coal and movement of the same during the summer months, as are also Government institutions, Federal, State, and local.

These and other recommendations which, if carried out, the commission believes, will do much to stabilize the coal industry, afford a considerable measure of relief to the carrier, and effect a saving for the public, are found in the summary of recommendations on pages 43 and 44 of this number of the **REVIEW**.

The overdeveloped condition of the industry is another cause of unemployment among the miners. According to the report, America, at the present time, requires less than 500,000,000 tons of bituminous coal per annum, while the mines are capable of producing 700,000,000 tons. Overdevelopment naturally increased during the war, with the result that more capital and more labor are now employed in the industry than present demands require.

Hours.

The miners' demand for a six-hour day and a five-day week, which would have reduced the actual working time from 48 hours to 30, was not granted for the following reasons:

1. It would restrict output.
2. Shorter hours would attract more men to an industry that in seasons of low movement is already overmanned, and this in turn would probably result in further demands for the shortening of hours.
3. Shorter hours would not reduce the risks run by miners by reducing the time during which they are exposed to this risk, because the miners wish to adopt the shorter day or week not to limit the number of hours per year, but merely to distribute them more evenly.

The Minority Report.

MR. JOHN P. WHITE, the member of the commission representing the miners, while in accord with some of the findings of the majority report, could not subscribe to its solution of several of the major problems, and therefore submitted a minority report offering amendments.

Wages.

As regards wages, he agrees that the Washington agreement of October 6, 1919, shall continue, but subject to changes which he mentions.

He accepts the 24 per cent increase on pick and machine mining and the 20 per cent increase for all yardage, dead work, and room turning, not because these increases will result in the standard of living mentioned in the majority report, but because they will materially improve the living conditions of the men affected. He holds that day and monthly men should receive \$1.35 per day; trappers and boys, 75 cents a day, instead of \$1. and 53 cents a day awarded these classes of workers, respectively.

Objection is made to the method of wage determination used in the majority report, and Mr. White emphasizes two errors into which, in his opinion, the joint report has fallen in calculating and apportioning the wage increase. "In the first place," he points out, "the weighting chosen is upon the tonnage basis instead of upon the man basis; and in the second place the day workers, who have received the larger increase heretofore, are utilized to depress the average increase due to pick and machine miners, and then are not themselves awarded the increase as thus depressed."

He agrees with the joint report in its estimate of average increases received by the machine miner, the pick miner, and the day worker, respectively; but in view of the fact that a coal-mining machine can produce on the average 17,000 tons of coal per year,

while the production per employee is considerably less than 1,000 tons, and in view of the further fact that the ultimate compensation is intended to be such as will enable human beings to live in a creditable manner, he asserts that, "when it is sought to combine the increases of the machine and the pick miner, obviously the weighting chosen should be on the basis of the number of men actually employed at the two occupations and not upon the number of tons produced by the two methods."

Estimating the increase in wages on the man basis alone the minority report claims that the increase should be 31 per cent instead of 27 per cent, and that the increase in tonnage rates should be 27 cents per ton and not 24 cents.

Irregularity of Employment and the Shorter Working Day.

The minority and majority reports are in full accord as to the unsatisfactory effect of the irregularity of employment in mining operations and of the overexpansion of the industry upon working conditions and prices. It is pointed out in the minority report, however, that the majority report fails to make constructive suggestions to meet the problem of overdevelopment. Instead it implies that a regularization of the market will solve the problem of irregularity of employment, or to put it in another way, that "unemployment can be eliminated by being distributed."

This Mr. White believes would be impossible even though all the suggestions to this effect in the majority report were realized. Basing his statements upon figures given in weekly reports of the United States Geological Survey, he shows that the coal necessary for the normal market can be mined on an average of 30 hours of operation a week, that during the war the average operation was between 30 and 40 hours per week, the highest figure being under 42 hours, and that since the armistice the actual average has been under 30 hours per week. He concludes that since at present there appears to be no way of preventing overproduction, regulating the market as suggested by the majority report "would simply regularize the short working period required to satisfy the needs of the country," and that herein lies the fallacy of the continued eight-hour day.

The amount of unemployment due to labor shortage and strikes as given in the majority report is also questioned in the minority report. Official statistics are submitted to show that between 1910 and 1918 only 10.6 per cent of days lost in this industry resulted from strikes.

Figures are furthermore given to indicate the American miner's great liability to death by accident, which is ascribed to his greater productivity.

In regard to the whole question of the eight-hour day, Mr. White feels that the miners should be assured of two things:

"(1) That it shall be a real eight-hour day; that is, eight hours from the time the miner leaves the surface to the time he returns to the surface; (2) that punitive overtime shall be established as a means to its enforcement, and he recommends 'that the present working hours of mine employees continue in effect until March 31, 1921, and that, beginning April 1, 1921, the maximum hours for employees shall not exceed eight hours underground per day, and six days per week.'"

Miscellaneous Recommendations of the Minority Report.

The recommendation of the minority report as regards a tribunal to consider the important question of differentials in the central competitive field differs from that of the majority report in the number of members composing it and in the manner of their selection. The majority report recommends a body of eight men, one mine worker and one operator from each district in this field, while the minority report recommends a body of five men, two representatives of the miners' international officials, two of the officials of the Coal Operators' Association of the central competitive field, and a disinterested member to be chosen by the United States Secretary of Labor.

It is furthermore suggested by the minority report that since the hearings showed and the majority report admits that the public paid about 80 per cent of the 14 per cent increase granted by Mr. Garfield, in increased prices, the operators should be able to absorb the remainder of the present 27 per cent increase, or 13 per cent.

The relation of labor costs to total costs, profits, and prices in the bituminous coal-mining industry as well as the profits of bituminous coal companies were treated in too great detail in the minority report to be adequately discussed in this review.

Briefly, the minority report, like the majority report, finds the general belief that wage increases have been and will be necessarily a primary cause of advancing coal prices a mistaken one. The truth of this statement is substantiated by statistics from a recent report on the coal industry published by the Federal Trade Commission and by other official data. A study of the conditions in the Pennsylvania, the southwestern, and various other coal fields established the facts that:

1. Increased coal prices were not due to increased labor costs, but, on the contrary, were due largely to increased profits exacted by the operators; and
2. Increased wages to labor were more than offset and rendered less than negligible by the increased efficiency and increased productivity of labor.

Conclusion.¹

Upon the acceptance by the President of the majority report the scale committee of the bituminous operators and of mine workers was called in joint conference in New York City, March 29, 1920, to consider the terms of the award as regards increases in wages.

On motion of the mine workers' representatives the commission's award of 27 per cent increase was accepted, effective April 1, 1920. Locals in the competitive field were immediately notified of the decision and thus any cessation of mining operations was avoided.

A subcommittee based on the coal commission's report and composed of the international officers of the mine workers and two operators and two miners from each of the four States in the central competitive field was appointed to negotiate a new wage contract in line with the recommendations of the majority report.

Analysis of Labor Provisions of the New Transportation Act.

THE new railroad control act passed by Congress and signed by the President February 28, 1920, differs from previous railroad legislation principally in its inclusion of significant and extended provisions for the adjustment of industrial relations in the railroad service. Previous railroad legislation had proceeded along two distinct lines. There was first a separate body of legislation affecting the finances and operations of the carriers; and a second series of laws regulating the relations of employer and employee. In the first group of laws belong, for instance, the first interstate commerce act of 1887, the Elkins Act of 1903, the Hepburn amendment of 1906, the Carmack amendment of the same year, the Mann-Elkins amendment of 1910, the Panama Canal act of 1912, and the two general laws on combinations and trusts—the Sherman act of 1890, and the Clayton act of 1914. The second group of laws has comprised the employers' liability act, 1908, the safety appliance act of 1893 and subsequent years, the mediation laws—Erdman, 1898, and Newlands, 1913—and finally the Adamson 8-hour law, September 3-5, 1916.

Following this came the war legislation, the chief feature of which has been the recognition extended to labor in the determination of labor conditions and regulations and in the adjustment of industrial relations.

¹ Data taken from Washington (D. C.) Post, Mar. 30, 1920, p. 1.

Under the act of August 29, 1917, the President was authorized to take possession and assume control of the transportation systems of the country and to use them for such purposes as were connected with the prosecution of the war. The proclamation for the assumption of control was issued December 26, 1917. Subsequently, through the Federal control act, March 21, 1918, control by Executive order was replaced by control defined and limited under provisions of law. This Federal control act provided for Government operation of the railroads during the period of the war and not exceeding 21 months after the exchange of ratification of the treaty of peace.

As respects the control of industrial relations the new act incorporates some of the corresponding provisions of the Federal control act of March 21, 1918. Two kinds of boards are created to handle disputes between the carriers and their employees and subordinate officials: (a) Railroad boards of labor adjustment; (b) a railroad labor board. The railroad administration act provided for three labor adjustment boards. No statement is contained in the new law as to the number of such boards. This class of boards, whatever the number set up, is to take jurisdiction of any dispute upon application of the chief executive of any carrier or organization of employees or upon the written petition of not less than 100 unorganized employees, or upon motion of the adjustment board itself on the request of the labor board.

No rules are laid down defining the precise composition of these adjustment boards and their methods of procedure. These matters are left to the decision of the carriers and their employees.

The labor adjustment boards receive for hearing and decide disputes involving only grievances, rules of employment, and working conditions which have not been settled in conference between the carrier and its employees. The transportation act, it will be observed, makes no change in the methods of collective dealing now in practice among the carriers and their employees for the making of the labor contract and determining general conditions of employment. The act, however, does attempt to give voice to the unorganized employees of the railroad. Whether or not this method of approach in dealing with the employees proves effective remains to be seen in the course of administration of the act.

The principal agency created by the law for the final adjustment of disputes between the railroads and their employees is the Railroad Labor Board. This board is composed of nine members—three representing the employees and subordinate officials, three representing the carriers, and three representing the public. All three groups of members are appointed by the President with the consent of the Senate, the first two groups from not less than six nominees offered by the employees and the carriers, respectively. Failure of

either group to propose nominees gives the President power to appoint members directly to represent the group. The third group is appointed directly by the President.

The members of the board may not hold active membership in any organization of employees or be pecuniarily interested in any carrier. Honorary membership in any organization or rights to insurance or pension benefits in such organization are not required to be relinquished. The term of office is five years, and the salary \$10,000 per annum. Removal for cause rests with the President.

The labor board is authorized to hear and decide on appeal from the adjustment boards matters which those boards are empowered to consider. Wage or salary disputes which are not within the jurisdiction of the adjustment boards are also decided by the labor board if not settled by conference between the carriers and their employees. The labor board obtains jurisdiction of all disputes in the same manner as the adjustment boards, namely, upon its own motion or upon petition of the carrier or of the employees, whether organized or unorganized.

The board may suspend the operation of any decision between a carrier and its employees if there is involved an increase in wages or salaries such as to necessitate a substantial readjustment of rates.

Decisions of the labor board require the assent of at least five of the nine members, and in cases of decisions affecting wages or salaries at least one of the representatives of the public must concur in the decision.

The board has wide powers in compelling the attendance of witnesses, production of books, documents, and other information. While no penalty is provided for the violation of a decision of the labor board, yet the board is authorized to examine into the observance of its decisions and to make public the facts in any case.

In making its decisions affecting salaries and wages the board is directed to take into consideration as far as applicable certain relevant circumstances. These relevant factors are: (1) The scale of wages paid for similar kinds of work in other industries; (2) the relation between wages and the cost of living; (3) the hazards of the employment; (4) the training and skill required; (5) the degree of responsibility; (6) the character and regularity of the employment; and (7) inequalities of increases in wages or of treatment, the result of previous wage orders or adjustments.

The labor board becomes a continuing investigational agency respecting the relation between the carriers and their employees, particularly as to questions of wages, hours of work, conditions of employment, and the privileges, rights, and duties of carriers and employees. It is authorized to gather, classify, and publish from time to time information relating to such questions. It is required to publish annually its administrative decisions and regulations as well

as those of the Interstate Commerce Commission in so far as the latter affect industrial relations.

The act requires each carrier to continue until September 1, 1920, the scale of compensation to its employees and subordinate officials which have been fixed under the Federal railroad control act. After that period wages will become subject to new adjustments between the carriers and their employees.

The Interstate Commerce Commission plays no essential part, exercises no control, within the field of industrial relations under the act. Its sole function in this respect is that of drafting the rules for the selection of the members of the Railroad Labor Board.

The prohibition of strikes, contained in the Senate bill, was not incorporated in the law. Apparently the law contains no provision for compulsory delay in striking pending investigation of a dispute. The act merely cites it as "the duty of all carriers and their officers, employees, and agents to exert every reasonable effort and adopt every available means to avoid any interruption to the operation of any carrier growing out of any dispute between the carrier and the employees or subordinate officials thereof." It is a duty without penalty that is here stated. Whether or not the method of the injunction could be invoked to enforce that duty will be one for future determination by the courts.

Labor Provisions of the Transportation Act, 1920.

THE following are the labor provisions of the act:

TITLE III.—*Disputes Between Carriers and Their Employees and Subordinate Officials.*

SECTION 300. When used in this title—

(1) The term "carrier" includes any express company, sleeping car company, and any carrier by railroad, subject to the Interstate Commerce Act, except a street, interurban, or suburban electric railway not operating as a part of a general steam railroad system of transportation;

(2) The term "adjustment board" means any railroad board of labor adjustment established under section 302;

(3) The term "labor board" means the Railroad Labor Board;

(4) The term "commerce" means commerce among the several States or between any State, Territory, or the District of Columbia and any foreign nation, or between any Territory or the District of Columbia and any State, or between any Territory and any other Territory, or between any Territory and the District of Columbia, or within any Territory or the District of Columbia, or between points in the same State but through any other State or any Territory or the District of Columbia or any foreign nation; and

(5) The term "subordinate official" includes officials of carriers of such class or rank as the commission shall designate by regulation formulated and issued after such notice and hearing as the commission may prescribe, to the carriers, and employees and subordinate officials of carriers, and organizations thereof, directly to be affected by such regulations.

SEC. 301. It shall be the duty of all carriers and their officers, employees, and agents to exert every reasonable effort and adopt every available means to avoid any

interruption to the operation of any carrier growing out of any dispute between the carrier and the employees or subordinate officials thereof. All such disputes shall be considered and, if possible, decided in conference between representatives designated and authorized so to confer by the carriers, or the employees or subordinate officials thereof, directly interested in the dispute. If any dispute is not decided in such conference, it shall be referred by the parties thereto to the board which under the provisions of this title is authorized to hear and decide such dispute.

SEC. 302. Railroad boards of labor adjustment may be established by agreement between any carrier, group of carriers, or the carriers as a whole, and any employees or subordinate officials of carriers, or organization or group of organizations thereof.

SEC. 303. Each such adjustment board shall, (1) upon the application of the chief executive of any carrier or organization of employees or subordinate officials whose members are directly interested in the dispute, (2) upon the written petition signed by not less than 100 unorganized employees or subordinate officials directly interested in the dispute, (3) upon the adjustment board's own motion, or (4) upon the request of the labor board whenever such board is of the opinion that the dispute is likely substantially to interrupt commerce, receive for hearing, and as soon as practicable and with due diligence decide, any dispute involving only grievances, rules, or working conditions, not decided as provided in section 301, between the carrier and its employees or subordinate officials, who are, or any organization thereof which is, in accordance with the provisions of section 302, represented upon any such adjustment board.

SEC. 304. There is hereby established a board to be known as the "Railroad Labor Board" and to be composed of nine members as follows:

(1) Three members constituting the labor group, representing the employees and subordinate officials of the carriers, to be appointed by the President, by and with the advice and consent of the Senate, from not less than six nominees whose nominations shall be made and offered by such employees in such manner as the commission shall by regulation prescribe;

(2) Three members, constituting the management group, representing the carriers, to be appointed by the President, by and with the advice and consent of the Senate, from not less than six nominees whose nominations shall be made and offered by the carriers in such manner as the commission shall by regulation prescribe; and

(3) Three members, constituting the public group, representing the public, to be appointed directly by the President, by and with the advice and consent of the Senate.

Any vacancy on the labor board shall be filled in the same manner as the original appointment.

SEC. 305. If either the employees or the carriers fail to make nominations, and offer nominees in accordance with the regulations of the commission, as provided in paragraphs (1) and (2) of section 304 within thirty days after the passage of this act in case of any original appointment to the office of member of the labor board, or in case of a vacancy in any such office within fifteen days after such vacancy occurs, the President shall thereupon directly make the appointment, by and with the advice and consent of the Senate. In making any such appointment the President shall, as far as he deems it practicable, select an individual associated in interest with the carriers or employees thereof, whichever he is to represent.

SEC. 306. (a) Any member of the labor board, one from each group shall be appointed for a term of three years, one for two years, and one for one year. Their successors shall hold office for terms of five years, except that any member appointed to fill a vacancy shall be appointed only for the unexpired term of the member whom he succeeds. Each member shall receive from the United States an annual salary of \$10,000. A member may be removed by the President for neglect of duty or malfeasance in office, but for no other cause.

SEC. 307. (a) The labor board shall hear, and as soon as practicable and with due diligence decide, any dispute involving grievances, rules, or working conditions, in respect to which any adjustment board certifies to the labor board that in its opinion the adjustment board has failed or will fail to reach a decision within a reasonable time, or in respect to which the labor board determines that any adjustment board has so failed or is not using due diligence in its consideration thereof. In case the appropriate adjustment board is not organized under the provisions of section 302, the labor board. (1) upon the application of the chief executive of any carrier or organization of employees or subordinate officials whose members are directly interested in the dispute, (2) upon a written petition signed by not less than 100 unorganized employees or subordinate officials directly interested in the dispute, or (3) upon the labor board's own motion if it is of the opinion that the dispute is likely substantially to interrupt commerce, shall receive for hearing, and as soon as practicable and with due diligence decide, any dispute involving grievances, rules, or working conditions which is not decided as provided in section 301 and which such adjustment board would be required to receive for hearing and decision under the provisions of section 303.

(b) The labor board, (1) upon the application of the chief executive of any carrier or organization of employees or subordinate officials whose members are directly interested in the dispute, (2) upon a written petition signed by not less than 100 unorganized employees or subordinate officials directly interested in the dispute, or (3) upon the labor board's own motion if it is of the opinion that the dispute is likely substantially to interrupt commerce, shall receive for hearing, and as soon as practicable and with due diligence decide, all disputes with respect to the wages or salaries of employees or subordinate officials of carriers, not decided as provided in section 301. The labor board may upon its own motion within ten days after the decision, in accordance with the provisions of section 301, of any dispute with respect to wages or salaries of employees or subordinate officials of carriers, suspend the operation of such decision if the labor board is of the opinion that the decision involves such an increase in wages or salaries as will be likely to necessitate a substantial readjustment of the rates of any carrier. The labor board shall hear any decision so suspended and as soon as practicable and with due diligence decide to affirm or modify such suspended decision.

(c) A decision by the labor board under the provisions of paragraphs (a) or (b) of this section shall require the concurrence therein of at least 5 of the 9 members of the labor board: *Provided*, That in case of any decision under paragraph (b) at least one of the representatives of the public shall concur in such decision. All decisions of the labor board shall be entered upon the records of the board, and copies thereof, together with such statement of facts bearing thereon as the board may deem proper, shall be immediately communicated to the parties to the dispute, the President, each adjustment board, and the commission, and shall be given further publicity in such manner as the labor board may determine.

(d) All the decisions of the labor board in respect to wages or salaries and of the labor board or an adjustment board in respect to working conditions of employees or subordinate officials of carriers shall establish rates of wages and salaries and standards of working conditions which in the opinion of the board are just and reasonable. In determining the justness and reasonableness of such wages and salaries or working conditions the board shall, so far as applicable, take into consideration among other relevant circumstances:

- (1) The scales of wages paid for similar kinds of work in other industries;
- (2) The relation between wages and the cost of living;
- (3) The hazards of the employment;
- (4) The training and skill required;
- (5) The degree of responsibility;

(6) The character and regularity of the employment; and

(7) Inequalities of increases in wages or of treatment, the result of previous wage orders or adjustments.

SEC. 308. The labor board—

(1) Shall elect a chairman by majority vote of its members;

(2) Shall maintain central offices in Chicago, Illinois, but the labor board may, whenever it deems it necessary, meet at such other place as it may determine;

(3) Shall investigate and study the relations between carriers and their employees, particularly questions relating to wages, hours of labor, and other conditions of employment and the respective privileges, rights, and duties of carriers and employees, and shall gather, compile, classify, digest, and publish from time to time data and information relating to such questions, to the end that the labor board may be properly equipped to perform its duties under this title and that the members of the adjustment boards and the public may be properly informed;

(4) May make regulations necessary for the efficient execution of the functions vested in it by this title; and

(5) Shall at least annually collect and publish the decisions and regulations of the labor board and the adjustment boards and all court and administrative decisions and regulations of the commission in respect to this title, together with a cumulative index-digest thereof.

SEC. 309. Any party to any dispute to be considered by an adjustment board or by the labor board shall be entitled to a hearing either in person or by counsel.

SEC. 310. (a) For the efficient administration of the functions vested in the labor board by this title any member thereof may require by subpoena issued and signed by himself the attendance of any witness and the production of any book, paper, document, or other evidence from any place in the United States at any designated place of hearing, and the taking of a deposition before any designated person having power to administer oaths. In the case of a deposition the testimony shall be reduced to writing by the person taking the deposition or under his direction and shall then be subscribed to by the deponent. Any member of the labor board may administer oaths and examine any witness. Any witness summoned before the board and any witness whose deposition is taken shall be paid the same fees and mileage as are paid witnesses in the courts of the United States.

(b) In case of failure to comply with any subpoena or in case of the contumacy of any witness appearing before the labor board the board may invoke the aid of any United States district court. Such court may thereupon order the witness to comply with the requirements of such subpoena, or to give evidence touching the matter in question, as the case may be. Any failure to obey such order may be punished by such court as a contempt thereof.

(c) No person shall be excused from so attending and testifying or deposing, nor from so producing any book, paper, document, or other evidence on the ground that the testimony or evidence, documentary or otherwise, required of him may tend to incriminate him or subject him to a penalty or forfeiture; but no natural person shall be prosecuted or subjected to any penalty or forfeiture for or on account of any transaction, matter, or thing as to which, in obedience to a subpoena and under oath, he may so testify or produce evidence, documentary or otherwise. But no person shall be exempt from prosecution and punishment for perjury committed in so testifying.

SEC. 311. (a) When necessary to the efficient administration of the functions vested in the labor board by this title, any member, officer, employee, or agent thereof, duly authorized in writing by the board, shall at all reasonable times, for the purpose of examination, have access to and the right to copy any book, account, record, paper, or correspondence relating to any matter which the board is authorized to consider or investigate. Any person who upon demand refuses any duly authorized member,

officer, employee, or agent of the labor board such right of access or copying, or hinders, obstructs, or resists him in the exercise of such right shall, upon conviction thereof, be liable to a penalty of \$500 for each such offense. Each day during any part of which such offense continues shall constitute a separate offense. Such penalty shall be recoverable in a civil suit brought in the name of the United States and shall be covered into the Treasury of the United States as miscellaneous receipts.

(b) Every officer or employee of the United States, whenever requested by any member of the labor board or an adjustment board duly authorized by the board for the purpose, shall supply to such board any data or information pertaining to the administration of the functions vested in it by this title which may be contained in the records of his office.

(c) The President is authorized to transfer to the labor board any books, papers, or documents pertaining to the administration of the functions vested in the board by this title which are in the possession of any agency or railway board of adjustment in connection therewith established for executing the powers granted the President under the Federal control act and which are no longer necessary to the administration of the affairs of such agency.

SEC. 312. Prior to September 1, 1920, each carrier shall pay to each employee or subordinate official thereof wages or salary at a rate not less than that fixed by the decision of any agency, or railway board of adjustment in connection therewith, established for executing the powers granted the President under the Federal control act, in effect in respect to such employee or subordinate official immediately preceding 12.01 a. m., March 1, 1920. Any carrier acting in violation of any provision of this section shall, upon conviction thereof, be liable to a penalty of \$100 for each such offense. Each such action with respect to any such employee or subordinate official and each day or portion thereof during which the offense continues shall constitute a separate offense. Such penalty shall be recoverable in a civil suit brought in the name of the United States, and shall be covered into the Treasury of the United States as miscellaneous receipts.

SEC. 313. The labor board, in case it has reason to believe that any decision of the labor board, or of an adjustment board, is violated by any carrier, or employee or subordinate official, or organization thereof, may upon its own motion after due notice and hearing to all persons directly interested in such violation, determine whether in its opinion such violation has occurred and make public its decision in such manner as it may determine.

SEC. 314. The labor board may (1) appoint a secretary, who shall receive from the United States an annual salary of \$5,000; and (2) subject to the provisions of the civil-service laws, appoint and remove such officers, employees, and agents; and make such expenditures for rent, printing, telegrams, telephone, law books, books of reference, periodicals, furniture, stationery, office equipment, and other supplies and expenses, including salaries, traveling expenses of its members, secretary, officers, employees, and agents, and witness fees as are necessary for the efficient execution of the functions vested in the board by this title and as may be provided for by Congress from time to time. All of the expenditures of the labor board shall be allowed and paid upon the presentation of itemized vouchers therefor approved by the chairman of the labor board.

SEC. 315. There is hereby appropriated for the fiscal year ending June 30, 1920, out of any money in the Treasury not otherwise appropriated, the sum of \$50,000, or so much thereof as may be necessary, to be expended by the labor board, for defraying the expenses of the maintenance and establishment of the board, including the payment of salaries as provided in this title.

SEC. 316. The powers and duties of the board of mediation and conciliation created by the act approved July 15, 1913, shall not extend to any dispute which may be received for hearing and decision by any adjustment board or the labor board.

Annual Report of Division of Labor, United States Railroad Administration, for 1919.

A RECOMMENDATION for the continuance, even after the end of Government operation of railroads, of the boards of adjustment¹ set up by the Railroad Administration to render decisions on controversies arising out of the application of wage orders and on other disputes between railroad officials and employees, is contained in the annual report for the year 1919 of the director of the Division of Labor of the Railroad Administration.

The report calls attention to the fact that railway boards of adjustment have no jurisdiction over the recommendation, issuance, and interpretation of wage orders, their duties being confined to decisions on controversies arising out of the application of wage orders and to decisions on all other disputes between the officials and employees working under agreements. The director of the Division of Labor regards the work of these boards as having demonstrated not only the advisability of the creation of such boards, but the necessity of their continuance either under Federal control of railroads or otherwise. The fact that the boards are "bipartisan," without "umpire" or "neutral member," and that all of the members are experts on railroad agreement matters, it is believed has led both officials and employees to have confidence not only in the fairness of decisions reached, but as to the technical ability of the members of the boards to pass intelligently upon all controversies submitted for decision.

The report outlines labor conditions on railroads prior to Government control and the railroad labor situation when Government control began, as follows:

One of the principal purposes of the creation of the Division of Labor was to provide means whereby the controversies that constantly arise between railroad officials and employees would be promptly and equitably adjusted. An inability to adjust these controversies under past practices resulted in strikes, threatened strikes, or a constant unrest among employees to the extent that the efficiency of the service had greatly diminished at the time that the roads were taken over under Federal control.

It is but fair to say that neither the operating officials nor the employees were entirely to blame for so undesirable a situation. While on some roads there had never been a liberal policy toward employees of certain classes, a study of past relations will reveal the fact that not so many years ago the labor policy of a railroad was developed entirely by the operating officers. At that time committees of employees, with the knowledge that their immediate operating officers had the authority to grant wage increases, revise wage agreements, and adjust personal grievances, entered into negotiations with their respective officials with an open mind, and with the belief that if evidence and argument could be presented that would prove their contentions, the operating officials of the road would at least grant some relief from the conditions of employment against which complaint was made.

¹ Accounts of the creation of these boards of adjustment were published in the MONTHLY LABOR REVIEW for May, 1918 (pp. 180-182), July, 1918 (p. 132), and March, 1919 (p. 162).

In those days wage increases were granted from time to time, wage agreements were revised so as to include rules more favorable to employees, and personal grievances arising out of the administration of discipline were disposed of usually without a strike or a threat of a strike.

It is alleged by employees that with a concentration of financial control of the railroads, either by groups or districts, operating officials lost all authority over the labor policies upon the respective railroads with the result that it was alleged that the operating officials of a railroad were no longer permitted to exercise their own judgment in disposing of these matters.

With the creation of "general managers' associations," covering a comparatively large territory, came "district movements" by employees for the adjustment of wage matters.

During the two or three years antedating Federal control of the railroads an alarming situation was created in that the employees' organizations, as a whole and through federations, found themselves confronted with similar federations on the part of the railroads, the roads being represented by conference committees and the conference committees being subordinate to "advisory committees." It was alleged by employees that these conference committees of all of the principal railroads in a district were not permitted to grant the demands of employees, or even to make favorable compromises, without the consent of the advisory committee. The advisory committee it is alleged was the agent of the great banking institutions that controlled the financial policy of all the railroads.

Arbitrations have been resorted to in the later years in these district movements, with the result that employees reached the conclusion that an arbitration award depended entirely upon the frame of mind of the neutral arbitrator. Persons selected to perform this function were liberal in their awards, in accordance with the liberality of their minds when appointed upon such arbitration boards.

There seems to have been a public opinion that any man, even indirectly connected with labor, would be unqualified to act as a neutral arbitrator, with the result that most estimable gentlemen who had never had any connection with, and who had little knowledge of, labor conditions, were called upon to act as umpires in these great contests. It was alleged by the employees that usually these arbitrators, having no technical knowledge of wage schedules, often made awards that were difficult of interpretation, if they did not, in fact, bring about conditions the very opposite to that intended by the neutral arbitrator. It also became apparent that in the application of the arbitration award the officials of a railroad were the sole administrators thereof, with the result that after employees had been led to believe that an arbitration award brought them much relief it was applied in a manner that "took away from them more than had been given them."

Later, provisions were made for submitting controversies over the application of an arbitration award back to the arbitration board or to some other umpire, but this resulted in the continuation of controversies over a period of two or three years.

It may be truthfully said that at the time the railroads passed under Federal control, because of these vexatious contentions, the morale of railway employees had sunk to a low degree. In many instances there was an entire absence of esprit de corps, so necessary for efficient operation.

It was with the knowledge of this alarming situation, and with a determination to restore harmonious relations between employees and the railroads and thereby increase the efficiency of the railroads, that the Division of Labor of the Railroad Administration was created.

Unauthorized Strikes in 1919.

DISCUSSING the unauthorized strikes which occurred on railroads during 1919, the report states:

During the year 1919 a considerable number of minor strikes occurred, practically all of which were not authorized by the organization of which the employees were members. A major proportion of these strikes was adjusted through the initiative of the Division of Labor. In some instances the representatives of this division used their good offices to bring about a final adjustment, but in other instances activities of the representatives of the division ceased when the strikers returned to work and the original controversy was referred by mutual consent back to the officials and employees of the railroads to adjust. * * *

It is believed that a vast majority of these unauthorized strikes arose out of the fact that the employees at these local points did not fully understand that a proper tribunal had been created by the Railroad Administration to which all controversies should be referred and that equitable decisions would be reached by such tribunal.

An interesting point in the report of Board of Adjustment No. 1, included in the report under review, is the statement that the average cost per decision during the last six months of 1919 was \$10.74, representing a reduction in cost per decision of \$10.03, or 48.29 per cent, as compared with the cost per decision during 1918. Board of Adjustment No. 2 reported that an average of four and one-half controversies had been passed upon at each meeting of the board. As of December 31, 1919, Board of Adjustment No. 1 reported that it had 160 cases not disposed of, 33 of them having been held waiting for further data; Board of Adjustment No. 2 reported that on the same day it had 86 cases not disposed of; and Board of Adjustment No. 3 reported that it had 31 cases not disposed of.

Conference of Australian Employers' Federations on Industrial Relationships.¹

A CONFERENCE of Australian employers' federations held in Melbourne during the latter part of 1919 resulted in the publication of a report setting forth the opinions of employers regarding the best methods of improving the relations between them and their workers. After commenting on the large number of strikes which took place during the years 1913 to 1918, the report proceeds to discuss the causes of industrial unrest, in the following words:

Limitation of output has undoubtedly had a considerable influence on the cost of living, but the main cause of industrial unrest would seem to be based on the assiduous promulgation of the belief that the workers should receive a larger share of the profits of the industry, and thus add to the amount received in the way of wages. Broadly speaking, it is the opinion of this conference that no mere changes of system can bring any substantial benefit to the employees. Nationalization, profit sharing, copart-

¹ Data taken from New Zealand Employers' Federation Industrial Bulletin, Jan. 6, 1920, pp. 4-6. Wellington.

nership, a voice in the management—all these things are mere variations in detail. The workers as a body would gain no substantial monetary advantages from the indiscriminate adoption of any or all of them. On the contrary, they might conceivably be worse off by an elimination of private enterprise, and the consequent lack of incentive to efficient and economical production.

The conference went on record definitely in favor of the promotion of harmony in the industrial life of the community by the adoption of the following recommendations:

1. The continuance of the present system of arbitration tribunals for fixing the living wage, and for settling the standard wage and working conditions in each industry.
2. Parliament to decide the number of hours to constitute a week's work.
3. The adoption of the Whitley scheme in a modified form.
4. The introduction of profit-sharing where practicable.
5. The adoption of the system of payment by results.
6. [Provision against] unemployment by general commonwealth taxation.
7. Encouragement and assistance to employees in the building or purchasing of their homes by State or Federal Government.
8. Commonwealth legal endowment for children under 14 years of age, where wages do not exceed a stipulated amount.

Whitley Scheme, Profit Sharing, Payment by Results.

CONCERNING the Whitley scheme the report makes the following general observation:

It is obvious that the adoption of the Whitley scheme in its entirety would render unnecessary the continuance of our present industrial tribunals established under State and Federal industrial laws, except as possible courts of appeal. This, we believe, would not be acceptable to the majority of trades-unionists and employers as a desirable or satisfactory change. That portion of the Whitley scheme which recommends the establishment of works committees and trade councils is, in our opinion, worthy of the most favorable consideration. Many questions arise in workshops and factories from day to day which could be satisfactorily dealt with and adjusted by such committees acting in conjunction and consultation with the management. It needs no stretch of imagination to discern enormous possibilities of benefit and advantage to employees and employers as a result of closer acquaintance and knowledge by both parties of what is possible and what is practicable in the conduct of business enterprises.

The following general statements in regard to profit sharing were made by the conference:

1. In most businesses after providing for a moderate return on capital and allowing reasonably for development there would be little left for division among employees.
2. Many businesses (especially manufacturing concerns) are carried on and developed so largely on borrowed capital, that if the book profits were paid away each year, liabilities could never be reduced and extensions would be impossible.
3. Profits shown in balance sheets are book profits, and are seldom represented by cash balances. In many instances the payment of a dividend representing mere interest on shareholders' capital is only possible by the confidence of the firm's bankers in the soundness and stability of the business.
4. In bad years the employees could not be expected to help make up the deficiency, but the absence of any profit or bonus would lead to discontent and dissatisfaction.
5. Any system adopted with the object of rewarding workers for increased output must provide payment for extra work done in bad years as well as in good years.

6. In industries where employment varies, change or irregularity of employment would deprive many workers of any participation in a division of profits.

7. The undue restriction of the profits and rewards of industrial undertakings would tend to destroy enterprise and react prejudicially upon the employees.

8. Profit sharing would not secure to the employees generally any substantial financial benefit.

9. Nevertheless, in any business or industry in which a system of profit sharing can be applied, which would be acceptable to employees, and insure substantial benefit, this conference recommends that it should be tried.

The principle of payment by results is recommended, with the following as the basis of remuneration:

1. The standard minimum wage in all industries shall be fixed by independent tribunals. The standard wage to be regarded as a fixed minimum and not to be affected by any agreement entered into on the basis of extra pay for extra output.

2. A representative of the employees (or a shop committee) to agree with the management as to the amount of work which shall be taken to represent the value of the standard wage.

3. Any individual employee who exceeds the minimum output shall be paid the full labor or time value of the work so performed.

4. Where desirable, or necessary, the output of a group of employees may be treated in a similar manner, the excess of hours or units of production to be computed and paid for weekly or monthly as may be arranged.

5. For the purpose of computing the time value of varied work, the employer to provide skilled accountancy assistance where necessary, and to pay the employees' appointed representative in each department for the time occupied in conferring with the management as to computation of time values.

6. Piecework to be introduced in industries or industrial sections, where the character of the work performed allows of fixed piecework rates being established.

The conference is of opinion that it would be possible to apply this system to a great many manufacturing establishments and other classes of business, with benefit to employees and employers, and with the very desirably additional result that the workers would receive substantial increased remuneration without any increase in the cost of production and without increasing the consequent selling price to the consumer.

In conclusion, the report states:

The conference recognizes that the assistance and good will of the trades-unions would be necessary for the successful adoption in any industry of the suggestions or recommendations contained in the report. It would involve the recognition by the unions of the introduction of piecework, or payment by results, with no limitation of output. It would also be necessary that employees in an industrial establishment shall be allowed to enter into agreements with the management in settling many local conditions, provided there was no infringement of an industrial award governing the industry in regard to wages, hours, and working conditions. The conference feels that it is necessary that concerted effort should be made to impress the lesson that the further development of industrial relations, based upon the idea of class war, can not but bring serious disaster to the whole community. Industry is a living organism and is undergoing a process of continuous development and growth. Change must, however, be gradual and on tested lines. Theories must be proved before they can be adopted, and the risk of personal loss is one of the great stabilizing influences. It must be apparent, however, that if a genuine effort is to be made toward a solution of an amelioration of the present disturbed industrial position it can be brought to a successful issue only by free and full discussion and a generous recognition by employers and employees that justice and fair dealing is the only foundation on which industrial peace can be established.

Labor Conditions on French Railways and Tramways.¹

OF ALL the problems confronting the Government in France that of transportation is apparently the most pressing. The demands of devastated areas call for extraordinary service. The physical condition of the roads both as to "ways" and equipment is far below normal. Facilities for repair and maintenance are insufficient. The personnel has been depleted. Skilled machinists and engineers are needed in construction and operating departments. The Minister of Public Works in circulars and reports recognizes the fidelity and loyalty shown by the employees during the difficult period of the war, and strongly recommends measures for their relief and compensation for extraordinary and continued sacrifices.

Recent orders issued by him also embody the principle of employees' representation. In connection with the management of the system consisting of the six State-owned roads, a committee on operation has been created consisting of an official appointed by the roads as president, the general manager of each of the six roads, three representatives of commerce, industry, and agriculture, appointed by the permanent bureau of the consultative committee on railroads from the members of the committee, and three employee representatives chosen by the Minister of Public Works. A similar committee has also been provided for, to take charge of all matters relative to materials and motive power.

These committees are authorized to summon the superintendents of the various departments of the service to attend their sessions in an advisory capacity. They are required to meet periodically, and the president or competent Government official may call them in special session. The committee on operation must meet at least once a week.

The instructions of the minister further state that for the purpose of restoring former efficiency all officials of the various roads, employees, and laborers, committees, etc., are to be consulted and requested to make suggestions looking to the improved physical condition of the roads, the advisability of lowering the standard required for certain employment in skilled occupations without impairing safety in operation, the granting of bonuses, the increasing of wages as an incentive to increased production and recruitment, and adoption of measures to maintain the stability of shop employees. Other recommendations relate to reemployment of service men; adoption of an increased wage scale and a schedule of better working regulations; introduction of the shift system in the operating depart-

¹ Journal Officiel de la République Française, Sept. 19, Oct. 21, Oct. 25, Nov. 4, and Nov. 9, 1919. Paris.

ment, and a modification of the retirement law. Maximum effort is demanded in all branches of railroad service and in the devastated districts working hours and conditions must to some extent be disregarded. Steps must be taken to restore the zeal and confidence of employees, and to recruit and instruct skilled mechanics.

The following provisions appear in these recent orders of the Minister of Public Works:

Rest periods.—Eight hours of actual work daily are to be the standard. The number of hours worked between rest days shall not exceed the number of days intervening multiplied by 8. Not more than 9 hours of actual work in 24 may be required except for special reasons. Under no conditions shall the hours exceed 10, limited to 6 days a month. The spread of the daily hours shall not exceed 12 per day, except that it may be twice increased to 14 between two consecutive rest days. It shall not average more than 10 hours per day between two consecutive rest periods. Employees working overtime must be granted a 30-minute lunch period after 6 hours of actual labor. There must be one rest period of 38 hours at home after 6 days of consecutive work. This period shall include 2 consecutive nights beginning not later than 10 p. m. on the first, and ending not earlier than 6 a. m. on the second night.

Shift systems.—In case work is done by a three-shift system of 8 hours each daily, rests shall be arranged to alternate with the various shifts, as follows: Each shift shall work 8 morning shifts followed by 32 hours off duty, then 8 night shifts followed by 56 hours off duty, and finally, 5 evening shifts, followed by a 32-hour rest interval.

When two shifts, A and B, only work, each employee shall work in shift A 8 hours daily for 8 consecutive days, followed by a rest, then in shift B 6 consecutive days, followed by a rest. The average duration of these off-duty periods shall be equal to the full day's rest plus 24 hours. An additional rest period of 24 hours every second month is arranged for by turns for the two shifts. During the off-duty periods the employee is subject to no call for service, and may be away from home.

Hours of work defined.—Actual working time is defined as including the entire time an employee is required to be on his locomotive or to remain near it, or is called upon to do any work in stations, depots, or shops.

Special regulations for the two classes of reserve employees include the provision that the spread of hours of reserve duty shall not exceed 18 hours daily, or 16 hours if actual work is included in this period.

Exception to the regular hours of work is permissible under certain conditions—danger, for national defense, urgent work, etc.

Overtime work.—Extra pay is provided for overtime work not compensated for in the next following rest period.

Employees' representation.—An order becoming effective December 10, 1919, provides for employees' representation on each of several of the State-owned roads, by the creation of central and local committees composed of engineers and firemen, and of central and local committees made up of trainmen. The personnel of the management of the railway systems and that of the employees is equally represented on these committees and the local committees elect the members of the central committees. Each committee is an advisory body on all questions relative to regulations adopted for the work of the personnel which it represents. The local committees are elected directly by the employees concerned.

Proposed changes in working regulations of engineers and firemen, and trainmen, respectively, are subject to the approval of the central committee and the administration. They are valid for three months unless exceptional circumstances seem to justify modifications, when either the road or the committee may demand an earlier revision.

Deviations from regular schedule.—When it becomes necessary to deviate from regular schedules, such deviations shall be reported to the competent officials not later than the tenth of the month following. More than five important deviations in any month call for a modification of schedules.

Tramways.²

General conditions.—During the last two years the Minister of Public Works has issued numerous decrees authorizing increased passenger and freight rates on tramways and local steam roads. In most, if not all, cases they were granted in consequence of agreements previously made between individual roads and municipal authorities, providing for increased wages, bonuses, improved working conditions, and other changes favorable to the employees. The increases in wages vary from 700 to 1,080 francs (\$135.10 to \$208.44, par) per year for the higher paid employees and proportional increases for all other classes. Bonuses for cost of living and family allowances for married employees are frequent items. These also vary, but the usual allowance for family charge is from 50 to 150 francs (\$9.65 to \$28.95, par) per year where there is but one child under 16 years of age, and from 100 to 300 francs (\$19.30 to \$57.90, par) for each additional child under that age. Not infrequently these increases are retroactive for some months.

Character of increases.—Illustrative of the character of increases is the agreement entered into August 18, 1919, between the Department of the Nord and the tramway companies of Douai. The pro-

² Journal Officiel de la République Française, Sept. 1 to Dec. 31, 1919.

posed increases in wage scales and allowances, and the period during which they will be paid, are made obligatory by the decree. The following table indicates their character and extent.³

PRESENT YEARLY WAGES AND AMOUNT OF INCREASE GRANTED ADULT MALE AND MINOR EMPLOYEES OF FRENCH TRAMWAYS.

[One franc at par=19.3 cents.]

Adult males.		Minors of both sexes, full-time workers.	
Present yearly wages.	Increase.	Present yearly wages.	Increase.
Not more than 3,600 francs.....	1,080 francs ¹	Not more than 1,200 francs.....	50 per cent.
From 4,800 to 6,000 francs.....	990 francs.....	From 1,200 to 1,800 francs.....	25 per cent.
From 6,001 to 7,000 francs.....	700 francs.....	From 1,800 to 3,600 francs.....	15 per cent.
From 7,001 to 8,000 francs.....	500 francs.....		
From 8,001 to 9,000 francs.....	300 francs.....		

¹ Reduced by 15 francs for each 100 francs increase in wages up to 4,800 francs.

Unless the husband or father of an adult female worker is in receipt of an increase or a pension paid by the company her yearly wages will be increased 1,080 francs (\$208.44 par). If the father or husband is in receipt of either, the increase will be 720 francs (\$138.96, par). For woman part-time workers, an increase of 540 francs (\$104.22, par) will be granted in case no pension or increase as above mentioned is paid, or 240 francs (\$46.32, par) if such pension or increase is paid.

Minors of both sexes who are part-time employees will receive an increase equal to that paid minors who are full-time workers, but no minimum wage has been established.

Yearly allowances for family charges are 150 francs (\$28.95, par) for each of the first two children, and 300 francs (\$57.90, par) for each additional child under 16 years of age. These allowances are reduced by 150 francs (\$28.95, par) in case of employees whose wages range from 8,100 francs to 9,000 francs (\$1,563.30 to \$1,737, par) and by 300 francs (\$57.90, par) for those receiving between 9,000 and 10,000 francs (\$1,737 and \$1,930, par) with corresponding decreases as wages exceed 10,000 francs.

An increase in transportation rates equal to 50 per cent was authorized for the period in which this agreement is in force.

Guaranteed income.—In some instances, as for example, the agreement of the city of Nancy and the General French Tramway Company, of October 6, 1919, the municipal authorities "recognize that it is imperative for the city to assist the company in supporting the new charges"⁴ imposed by new social laws, and provide that a special account be kept of all wage increases, allowances, etc., as stipulated in the agreement, and paid by the company from August 1, 1919, as well as the additional expense incurred in the em-

³ Journal Officiel de la République Française, Sept. 19, 1919.

⁴ Idem, Nov. 4, 1919.

ployment of new employees made necessary by the eight-hour law, including the amount paid by the company into the retirement fund. If expenses exceed receipts the city must cover the deficiency, not in excess of the amount of the special account. Quarterly statements are required. The total advances made in consequence of these expenses for the year shall in no case be greater than the difference between expenses and receipts. At the end of the year the company reimburses the city for any sums that may have been advanced in previous quarters in excess of the difference.

The average hours of daily labor for the year shall not exceed eight. Permanent employees in the operating department are entitled to 10 days' annual leave as compensation for extra hours. Wages are determined by length of service, with advancement after two years in each of the respective classes. Women may be generally employed, but may perform the duties of motorman in exceptional cases only. Trainmen having been two years in the service of the company are eligible as conductor apprentices. Conductors are chosen from permanent employees who have served a probationary period of one year.

Compensation for increased cost of living is fixed for all classes engaged in train movement at 2 francs (38.6 cents, par) per day. Permanent employees are paid this bonus for the regular weekly rest day also, others only for actual days worked. The cost of living bonus in addition to wages is paid to married persons only.

Eight hours of actual labor per day constitute a day's work in the shop. Wages vary with the class of work, occupational skill, and length of service, a minimum of 1.5 francs (29 cents, par) per hour being paid for unskilled labor, bonuses included.

Persons whose physical condition precludes the performance of a full day's work may be paid a rate lower than the regular wages, but the maximum proportion of such workmen is fixed at one-eighth of all employees, and the reduction from regular wages must not be greater than 25 per cent. During the period of military training regular employees are paid at one-half the usual rate. Sickness benefits are paid at the rate of two-thirds regular wages for the first 15 days of sickness, 6 francs per day thereafter up to the end of three months, and 4 francs per day for the next three months. During the life of the agreement the company assumes the entire charge of medical, pharmaceutical, and other expenses and compensation in cases of sickness.

Discharges for other than grave fault and without eight days' advance notice, are prohibited, and no one shall quit employment without giving similar notice of his intention. A discharged employee may demand a hearing before a board in which the employees are represented.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

THE following tables are based on figures which have been received by the Bureau of Labor Statistics from retail dealers through monthly reports of actual selling prices.¹

Table 1 shows for the United States retail prices of food on January 15 and February 15, 1920, and on February 15, 1919, as well as the percentage changes in the month and in the year. For example, the price of sugar in February, 1919, was 10.7 cents; in January, 1920, 17.8 cents; and in February, 1920, 18.8 cents. These figures show an increase of 6 per cent in the month and an increase of 76 per cent in the year. The cost of 22 weighted articles combined² increased 16 per cent in the year, but decreased six-tenths of 1 per cent in the month.

TABLE 1.—AVERAGE RETAIL PRICE OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, FEB. 15, 1920, COMPARED WITH FEB. 15, 1919, AND JAN. 15, 1920.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (—) Feb. 15, 1920, compared with—	
		Feb. 15, 1919.	Jan. 15, 1920.	Feb. 15, 1920.	Feb. 15, 1919.	Jan. 15, 1920.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	41.2	40.5	40.6	— 1	+ 0.3
Round steak.....	do.....	38.8	37.0	37.2	— 4	+ 1
Rib roast.....	do.....	32.6	31.4	31.5	— 3	+ 0.3
Chuck roast.....	do.....	27.9	25.3	25.1	— 10	— 1
Plate beef.....	do.....	21.9	18.4	18.4	— 16	0
Pork chops.....	do.....	37.9	37.3	37.6	— 1	+ 1
Bacon.....	do.....	55.3	50.3	50.0	— 10	— 1
Ham.....	do.....	51.8	50.3	50.5	— 3	+ 0.4
Lamb.....	do.....	36.4	36.4	39.1	+ 7	+ 7
Hens.....	do.....	39.6	42.0	44.7	+ 13	+ 6
Salmon, canned.....	do.....	31.7	37.1	37.6	+ 19	+ 1
Milk, fresh.....	Quart.....	15.5	16.6	16.8	+ 8	+ 1
Milk, evaporated (unsweetened).....	15-16 oz. can.....	16.4	17.0	16.2	— 1	— 5
Butter.....	Pound.....	57.2	74.2	72.6	+ 27	— 2
Oleomargarine.....	do.....	39.2	43.5	43.4	+ 11	— 0.2
Nut margarine.....	do.....	35.9	35.9	36.1	+ 1	+ 1
Cheese.....	do.....	40.9	43.4	43.3	+ 6	— 0.2
Lard.....	do.....	32.1	34.0	32.3	+ 1	— 5
Crisco.....	do.....	33.8	37.8	37.8	+ 12	0
Eggs, strictly fresh.....	Dozen.....	50.6	82.7	68.6	+ 36	— 1

¹ In addition to retail prices of food, the bureau secures prices of coal, gas, and dry goods from each of 51 cities, and publishes these prices as follows: Coal, in the March and September issues of the MONTHLY LABOR REVIEW; gas, in the June issue; dry goods, in the April, July, October, and December issues.

² Following are the 22 articles, weighted according to the consumption of the average family: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, tea. These include all articles for which prices have been secured each month since 1913, with the exception of lamb, for which the Bureau has no consumption figures.

TABLE 1.—AVERAGE RETAIL PRICE OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, FEB. 15, 1920, COMPARED WITH FEB. 15, 1919, AND JAN. 15, 1920—Concluded.

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (−) Feb. 15, 1920, compared with—	
		Feb. 15, 1919.	Jan. 15, 1920.	Feb. 15, 1920.	Feb. 15, 1919.	Jan. 15, 1920.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Eggs, storage.....	Dozen.....	46.8	62.5	59.4	+ 27	− 5
Bread.....	Pound ^a	9.8	10.9	10.8	+ 10	+ 2
Flour.....	Pound.....	6.7	8.1	8.1	+ 21	0
Corn meal.....	do.....	6.0	6.6	6.5	+ 8	− 2
Rolled oats.....	do.....	8.4	9.9	11.1	+ 19	+ 1
Corn flakes.....	8-oz. pkg.....	14.1	14.1	14.1	0	0
Cream of Wheat.....	28-oz. pkg.....	25.1	28.8	29.3	+ 17	+ 2
Macaroni.....	Pound.....	19.4	19.8	20.2	+ 4	+ 2
Rice.....	do.....	14.3	18.1	18.3	+ 28	+ 1
Beans, navy.....	do.....	13.7	12.2	12.2	− 11	0
Potatoes.....	do.....	3.1	5.4	6.0	+ 94	+11
Onions.....	do.....	4.3	9.0	9.4	+119	+ 4
Cabbage.....	do.....	4.3	8.1	9.3	+116	+15
Beans, baked.....	No. 2 can.....	18.6	16.9	16.9	− 9	0
Corn, canned.....	do.....	19.6	18.8	18.7	− 5	− 1
Peas, canned.....	do.....	19.2	19.2	19.1	− 1	− 1
Tomatoes, canned.....	do.....	17.0	15.4	15.3	− 9	− 1
Sugar, granulated.....	Pound.....	10.7	17.8	18.8	+ 76	+ 6
Tea.....	do.....	68.4	72.0	71.0	+ 4	− 1
Coffee.....	do.....	36.6	49.1	49.0	+ 34	− 0.2
Prunes.....	do.....	20.3	29.1	29.0	+ 43	− 0.3
Raisins.....	do.....	16.2	24.8	25.6	+ 58	+ 3
Bananas.....	Dozen.....	35.0	40.9	41.0	+ 17	+ 0.2
Oranges.....	do.....	46.8	51.0	53.2	+ 14	+ 4
22 weighted articles ⁴.....	.....	.....	.....	.....	+ 16	− 0.6

^a Baked weight.⁴ See note ² p. 68.

Table 2 shows for the United States average retail prices of specified food articles on February 15 of each year, 1913 to 1920, together with the percentage change in February of each year compared with February, 1913. For example, as compared with the price in February, 1913, potatoes had increased 19 per cent in 1914, but in 1915 were 6 per cent cheaper than in 1913. By 1916 potatoes had increased 56 per cent; by 1917, 219 per cent, or cost over three times as much as in 1913. In 1918, the price was double that of 1913. In February, 1919, the price was 94 per cent higher than in February, 1913, and in February, 1920, the price had increased 275 per cent, or was 3½ times as much as it was in February, 1913.

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TABLE 2.—AVERAGE RETAIL PRICE OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE FEB. 15 OF EACH YEAR, 1914 TO 1920, COMPARED WITH FEB. 15, 1913.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price Feb. 15—									Per cent of increase (+) or decrease (-) Feb. 15 of each specified year compared with Feb. 15, 1913.								
		1913	1914	1915	1916	1917	1918	1919	1920	1914	1915	1916	1917	1918	1919	1920			
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.										
Sirloin steak.....	Lb.	24.0	25.4	21.8	23.9	28.7	33.4	41.2	40.6	+ 6	+ 3	+ 7	+ 20	+ 39	+ 72	+ 69			
Round steak.....	Lb.	20.6	22.8	22.3	22.8	26.0	31.4	38.8	37.2	+11	+ 8	+11	+ 26	+ 52	+ 88	+ 81			
Rib roast.....	Lb.	18.9	19.9	19.7	20.1	22.5	26.3	32.6	31.5	+ 5	+ 4	+ 6	+ 19	+ 39	+ 72	+ 67			
Chuck roast.....	Lb.	14.9	16.3	16.2	16.2	18.6	22.7	27.9	25.1	+ 9	+ 9	+ 9	+ 23	+ 52	+ 87	+ 68			
Plate beef.....	Lb.	11.1	12.4	12.3	12.2	14.1	17.7	21.9	18.4	+12	+11	+10	+ 27	+ 59	+ 97	+ 66			
Pork chops.....	Lb.	18.8	20.9	17.9	19.3	26.1	33.6	37.9	37.6	+11	- 5	+ 3	+ 39	+ 79	+102	+100			
Bacon.....	Lb.	25.5	25.4	26.7	27.3	30.7	48.4	55.3	50.0	+ 4	+ 5	+ 7	+ 20	+ 90	+117	+ 96			
Ham.....	Lb.	25.3	25.5	25.9	29.7	31.8	43.8	51.8	52.5	+ 5	+ 2	+17	+ 23	+ 73	+105	+100			
Lamb.....	Lb.	18.5	18.9	18.8	21.2	25.9	31.4	36.4	39.1	+ 2	+ 2	+15	+ 40	+ 70	+ 97	+111			
Hens.....	Lb.	20.8	22.2	20.8	22.2	26.7	36.2	39.6	44.7	+ 7	0	+ 7	+ 28	+ 74	+ 90	+115			
Salmon, canned.....	Lb.			19.8	20.0	21.6	29.1	31.7	37.6										
Milk, fresh.....	Qt.	8.9	9.1	8.9	8.9	10.0	13.4	15.5	16.8	+ 2	0	0	+ 12	+ 51	+ 74	+ 89			
Milk, evaporated (unsweetened).....	(⁵)							16.4	16.2										
Butter.....	Lb.	41.4	35.9	37.8	37.8	46.9	57.9	57.2	72.6	-13	- 9	- 9	+ 13	+ 40	+ 38	+ 75			
Oleomargarine.....	Lb.							39.2	43.4										
Nut margarine.....	Lb.							35.9	36.1										
Cheese.....	Lb.	22.2	23.0	23.5	24.8	31.5	34.9	40.9	43.3	+ 4	+ 6	+12	+ 42	+ 57	+ 84	+ 95			
Lard.....	Lb.	15.4	15.8	15.2	17.7	21.9	33.0	32.1	32.3	+ 3	- 1	+15	+ 42	+114	+108	+110			
Crisco.....	Lb.							33.8	37.8										
Eggs, strictly fresh.....	Doz.	31.5	36.4	33.8	34.9	50.6	61.1	50.6	68.6	+16	+ 7	+11	+ 61	+ 94	+ 61	+118			
Eggs, storage.....	Doz.	23.5	32.6	26.7	26.6	46.3	54.7	46.8	59.4	+39	+14	+13	+ 97	+133	+ 99	+153			
Bread.....	Lb. ⁶	5.7	6.2	7.1	7.0	8.0	9.5	9.8	11.1	+ 9	+25	+23	+ 40	+ 67	+ 72	+ 95			
Flour.....	Lb.	3.3	3.2	4.5	4.1	5.6	6.6	6.7	8.1	- 3	+36	+24	+ 70	+100	+103	+145			
Corn meal.....	Lb.	3.0	3.1	3.3	3.3	4.1	7.0	6.0	6.5	+ 3	+10	+10	+ 37	+133	+100	+117			
Rolled oats.....	Lb.							8.4	10.0										
Corn flakes.....	(⁷)							14.1	14.1										
Cream of Wheat.....	(⁸)							25.1	29.3										
Macaroni.....	Lb.							19.4	20.2										
Rice.....	Lb.	8.6	8.7	9.1	9.1	9.1	11.8	14.3	18.3	+ 1	+ 6	+ 6	+ 6	+ 37	+ 66	+113			
Beans, navy.....	Lb.			7.6	9.2	14.9	18.1	13.7	12.2										
Potatoes.....	Lb.	1.6	1.9	1.5	2.5	5.1	3.2	3.1	6.0	+19	- 6	+56	+219	+100	+ 94	+275			
Onions.....	Lb.			3.4	4.4	12.2	4.9	4.3	9.4										
Cabbage.....	Lb.							4.3	9.3										
Beans, baked.....	(⁹)							18.6	16.9										
Corn, canned.....	(⁹)							19.6	18.7										
Peas, canned.....	(⁹)							19.2	19.1										
Tomatoes, canned.....	(⁹)							17.0	15.3										
Sugar, granulated.....	Lb.	5.5	5.1	6.4	6.8	8.1	10.6	10.7	18.8	- 7	+16	+24	+ 47	+ 93	+ 95	+242			
Tea.....	Lb.	54.3	54.5	54.6	54.6	54.6	60.9	68.4	71.0	+0.4	+ 1	+ 1	+ 1	+ 12	+ 26	+ 31			
Coffee.....	Lb.	29.8	29.6	29.9	29.9	29.9	30.4	36.6	49.0	- 1	0	0	0	+ 2	+ 23	+ 64			
Prunes.....	Lb.			13.7	13.3	14.1	16.5	20.3	29.0										
Raisins.....	Lb.			12.5	12.6	14.1	15.0	16.2	25.6										
Bananas.....	Doz.							35.0	41.0										
Oranges.....	Doz.							46.8	53.2										
22 weighted articles. ¹⁰										+ 3	+ 4	+ 9	+ 37	+ 65	+ 77	+105			

⁵ 15-16 ounce can.⁶ Baked weight.⁷ 8-ounce package.⁸ 28-ounce package.⁹ No. 2 can.¹⁰ See note 2, p. 68.

Relative Retail Prices of 22 Articles of Food.

IN TABLE 3, the average monthly and yearly prices of 22 food articles¹¹ are shown as relative prices or percentages of the average prices for the year 1913. These relatives are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. Relative prices must be used with caution. For example, the relative price of pork chops in November, 1919, was 200, which means that the money price was 200 per cent of the money price in 1913, or, in other words, the price doubled. The relative price of pork chops in December was 181, showing a drop of 19 points from 200, which is a decrease of only 9.5 per cent.

In the last column of this table are given index numbers¹² showing the changes by months and years in the retail cost of the 22 food articles weighted according to the importance of each article in the consumption of the average family. Prices are obtained each month for 43 food articles, but only 22 of these are included in the retail food price index because the amounts consumed by the average family have been obtained as yet for only these 22 food articles. These articles comprise about two-thirds of the entire food budget of the average family and reflect with great accuracy changes in the cost of the food budget. The figure representing the cost of these 22 food articles was 201 in January, 1920, and 200 in February, 1920. This shows that as compared with 1913 the cost of these food articles was in February, 1920, double what it was in 1913. The figures also show that from January to February of this year there was a decrease of less than 1 per cent. In 1919, the figures for January was 185 and for February was 172, which shows a decrease of 7 per cent in February of last year.

¹¹ For list of articles, see note 2, p. 68.

¹² For a discussion of the method used in the computation of these index figures, see MONTHLY LABOR REVIEW for March, 1920, pp. 34 and 35.

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907, TO FEBRUARY, 1920.

[1913=100.]

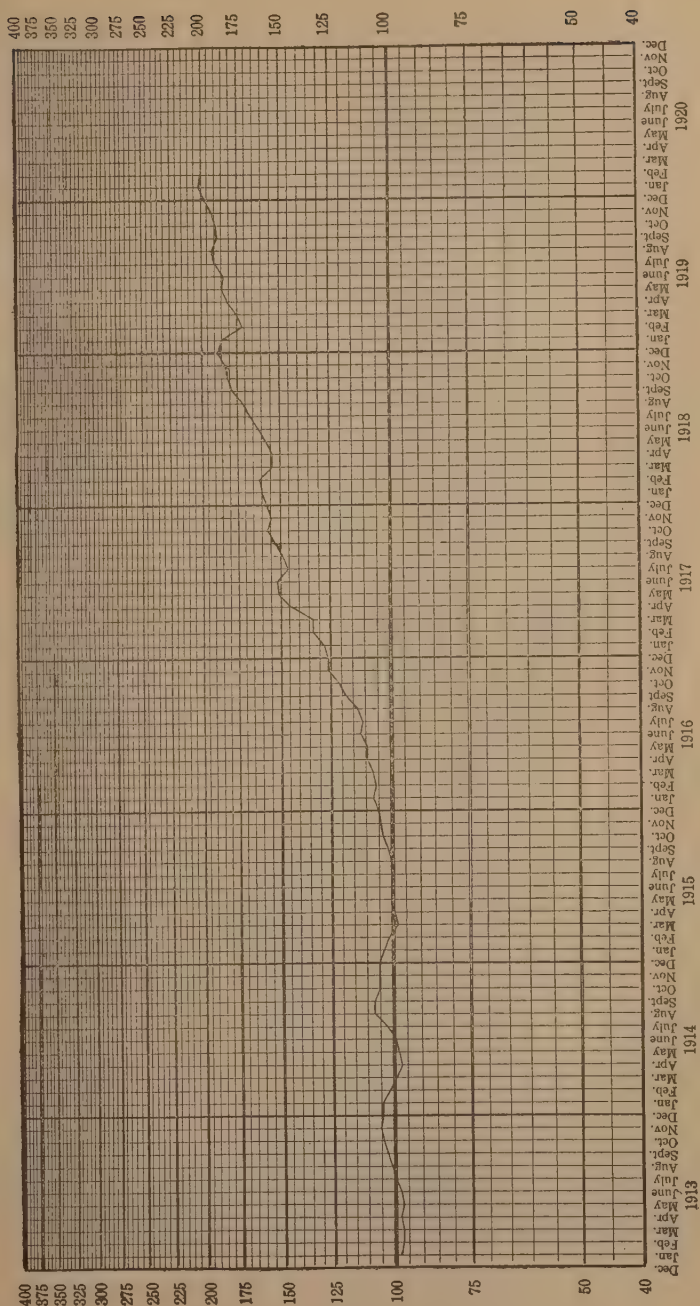
Year and month,	Sirloin steak,	Round steak,	Rib roast,	Chuck roast,	Plate beef,	Pork chops,	Bacon,	Ham,	Lard,	Hens, Eggs,	Butter,	Cheese,	Milk,	Bread,	Flour,	Corn meal,	Rice,	Potatoes,	Sugar,	Coffee,	Tea,	22 weight- ed arti- cles,
1907.....	71	68	76	100	100	74	74	76	81	81	85	.....	87	.....	95	88	.....	105	105	.....	.....	82
1908.....	73	71	78	93	92	76	77	78	80	83	86	.....	90	.....	102	92	.....	111	108	.....	.....	84
1909.....	77	74	81	95	93	83	83	83	90	89	90	.....	91	.....	109	94	.....	112	107	.....	.....	89
1910.....	80	78	85	95	91	85	92	91	104	94	93	.....	95	.....	108	95	.....	101	109	.....	.....	93
1911.....	81	77	85	91	89	85	91	89	88	91	88	.....	96	.....	102	94	.....	130	111	.....	.....	92
1912.....	91	89	94	.....	.....	91	91	91	94	93	98	.....	97	.....	115	102	.....	132	115	.....	.....	98
1913: Av. for year.....	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
January.....	94	92	95	93	92	80	84	83	97	95	108	100	100	100	100	99	99	91	106	100	100	100
February.....	94	93	95	93	93	80	85	94	98	97	108	100	100	100	100	100	99	90	100	100	100	98
March.....	97	96	98	98	98	97	97	97	99	100	107	100	100	100	100	98	99	90	99	100	100	97
April.....	101	99	101	101	101	103	99	99	100	104	105	100	100	100	100	98	99	88	99	100	100	97
May.....	101	101	101	101	101	103	99	99	100	104	105	100	100	100	100	98	99	87	98	100	100	98
June.....	102	101	102	102	101	99	101	102	100	103	94	99	99	100	101	98	99	91	97	100	100	97
July.....	104	104	102	103	103	101	104	104	101	102	81	92	99	100	101	98	99	104	97	100	100	98
August.....	104	104	102	103	101	104	105	106	102	101	96	99	99	100	101	98	100	110	100	100	100	100
September.....	103	104	101	103	102	108	104	104	102	101	98	100	100	100	100	100	100	109	102	100	100	101
October.....	101	104	101	103	102	107	103	102	101	100	98	100	100	100	99	103	100	110	104	100	100	102
November.....	100	102	100	102	102	101	100	100	101	97	144	101	102	100	99	104	100	107	99	100	100	104
December.....	99	101	100	101	102	97	99	99	100	98	104	102	102	100	99	104	100	106	98	100	100	104
1914: Av. for year.....	102	106	103	104	104	105	102	102	99	102	94	104	100	112	104	105	101	108	108	100	100	102
January.....	99	102	100	102	102	99	98	98	100	126	104	104	102	110	98	104	100	108	95	99	100	104
February.....	99	102	101	103	102	100	98	99	99	104	93	104	102	110	99	103	100	108	94	99	100	101
March.....	100	103	101	102	102	100	99	99	99	105	90	105	101	110	99	103	100	107	93	100	100	99
April.....	100	103	102	103	102	103	99	99	99	108	86	104	100	110	99	103	100	105	91	100	100	97
May.....	102	105	102	103	103	106	99	99	98	106	77	103	100	110	99	103	100	112	91	100	101	98
June.....	103	106	103	104	103	103	100	100	97	103	82	103	100	110	99	103	100	132	93	100	101	99
July.....	106	109	105	106	104	106	101	103	97	103	87	103	100	110	98	103	101	155	95	99	101	102
August.....	110	113	108	109	107	119	107	108	99	104	96	104	100	112	106	105	101	143	100	101	101	107
September.....	107	110	105	108	107	113	108	108	99	103	98	104	100	114	113	108	101	145	100	101	101	107
October.....	103	107	104	106	106	104	106	105	98	100	113	104	101	114	111	109	101	89	132	99	101	105
November.....	100	105	103	104	105	104	104	102	99	97	131	103	104	114	112	109	101	83	113	99	101	105
December.....	101	103	101	103	103	93	103	100	97	94	139	103	104	116	113	107	101	84	110	99	101	105
1915: Av. for year.....	101	103	101	101	100	96	100	97	93	97	99	105	99	124	126	108	104	89	120	101	100	101
January.....	100	102	101	101	102	88	101	98	97	95	129	101	105	120	124	109	104	85	110	101	100	103
February.....	98	100	100	99	101	85	99	96	97	97	98	106	100	126	138	110	104	84	118	101	100	101
March.....	97	99	99	98	100	85	98	95	96	99	74	106	98	126	136	110	104	82	120	101	100	98
April.....	99	100	100	99	100	94	98	94	96	100	94	105	99	126	137	109	104	86	122	101	100	99

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907, TO FEBRUARY, 1920—Concluded.

Year and month.	Strloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Ba- con.	Ham.	Lard.	Hens.	Eggs.	But- ter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Pota- toes.	Sug- ar.	Col- fee.	Tea.	22 weight- ed arti- cles.
1919: Av. for year--	164	174	164	169	167	201	205	199	224	193	182	177	193	174	179	218	213	174	224	205	145	139	186
January.....	162	175	165	175	181	193	217	199	211	183	213	184	201	175	175	200	207	169	188	196	117	127	185
February.....	162	174	165	174	181	180	205	193	203	186	147	149	185	174	175	203	200	164	182	195	123	126	172
March.....	165	177	169	178	183	184	203	191	211	193	140	174	183	166	175	206	197	154	171	193	126	129	175
April.....	172	182	175	184	187	197	212	197	223	202	143	186	190	169	175	218	200	154	182	193	129	128	182
May.....	175	187	178	186	181	205	210	203	246	204	154	177	191	167	175	227	207	154	194	193	133	128	185
June.....	170	181	171	176	174	202	212	205	254	200	155	165	192	169	177	227	210	159	224	183	143	123	184
July.....	171	183	169	173	168	200	215	211	256	197	164	164	195	169	179	227	217	168	282	198	155	130	190
August.....	166	177	164	166	160	223	214	212	258	196	174	167	197	174	180	224	220	178	294	202	160	130	192
September.....	161	170	158	158	150	219	206	205	242	194	183	172	195	176	180	221	223	190	253	200	164	130	188
October.....	157	165	155	153	145	211	196	195	228	189	209	186	192	180	180	221	220	199	224	207	159	131	189
November.....	155	162	153	151	143	200	189	188	231	184	235	197	195	184	182	224	220	202	229	227	164	131	192
December.....	154	161	153	152	143	181	186	185	221	184	261	204	196	183	182	233	220	203	253	264	164	127	197
1920:																							
January.....	159	166	159	158	152	178	186	187	215	197	240	194	196	187	195	245	220	208	318	324	165	132	201
February.....	160	167	159	157	152	179	185	188	204	210	199	190	196	189	198	245	217	210	353	342	164	131	200

TREND IN RETAIL PRICES OF 22 FOOD ARTICLES, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO FEBRUARY, 1920.

[Average for 1913=100.]



The curve shown in the chart on page 75 pictures more readily to the eye the changes in the cost of the family market basket and the trend in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale ¹⁴ because the percentages of increase and decrease are more accurately shown than on the arithmetic scale.

Comparison of Retail Food Costs in 50 Cities.

TABLE 4 shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles in February, 1920, compared with the average cost in the year 1913, in February 1919, and in January, 1920. For 11 other cities comparisons are given for the one-year and one-month periods. These cities have been scheduled by the Bureau at different dates since 1913. These percentage changes are based on actual retail prices secured each month from retail dealers, and on the average family consumption of these articles in each city.¹⁵

TABLE 4.—PERCENTAGE CHANGES IN THE RETAIL COST OF 22 FOOD ARTICLES¹⁶ IN FEBRUARY, 1920, COMPARED WITH THE COST IN JANUARY, 1920, FEBRUARY, 1919, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

[Percentage changes of five-tenths of 1 per cent and over are in whole numbers.]

City.	Percentage increase, February, 1920, compared with—		Percentage increase (+) or decrease (—) February, 1920, compared with January 1920.	City.	Percentage increase, February 1920, compared with—		Percentage increase (+) or decrease (—) February, 1920, compared with January, 1910.
	1913	February 1919.			1913	February 1919	
Atlanta.....	98	13	— 1	Milwaukee.....	106	20	—0.1
Baltimore.....	103	8	— 1	Minneapolis.....	107	24	— 1
Birmingham.....	102	14	— 2	Mobile.....		13	+0.4
Boston.....	95	18	—0.1	Newark.....	92	12	— 1
Bridgeport.....		7	0	New Haven.....	97	15	+ 1
Buffalo.....	106	17	— 1	New Orleans.....	97	13	— 3
Butte.....		18	— 1	New York.....	103	16	— 1
Charleston.....	106	12	— 1	Norfolk.....		15	+ 1
Chicago.....	101	20	—0.3	Omaha.....	103	19	— 1
Cincinnati.....	95	15	— 4	Peoria.....		21	+0.4
Cleveland.....	101	19	— 2	Philadelphia.....	98	14	— 1
Columbus.....		15	— 1	Pittsburgh.....	99	15	— 2
Dallas.....	95	12	— 3	Portland, Me.....		14	+ 3
Denver.....	90	12	+0.2	Portland, Oreg.....	84	13	— 1
Detroit.....	110	23	— 1	Providence.....	107	17	+0.4
Fall River.....	100	16	—0.1	Richmond.....	106	15	—0.2
Houston.....		14	— 2	Rochester.....		18	—0.2
Indianapolis.....	96	18	— 1	St. Louis.....	108	18	— 1
Jacksonville.....	90	13	— 2	St. Paul.....		23	+ 1
Kansas City Mo.....	99	23	+0.4	Salt Lake City.....	79	12	—0.1
Little Rock.....	92	12	— 3	San Francisco.....	88	14	+ 1
Los Angeles.....	79	14	+0.4	Scranton.....	103	16	— 1
Louisville.....	92	10	— 2	Seattle.....	92	13	+ 1
Manchester.....	100	18	— 1	Springfield, Ill.....		23	—0.2
Memphis.....	102	14	+0.3	Washington, D. C.....	107	12	—0.4

¹⁴ For a discussion of the logarithmic chart see article on Comparison of arithmetic and ratio charts, by Lucian W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, The "ratio" chart, by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June 1917, 24 pp.

¹⁵ The consumption figure used for each article in each city is given in the MONTHLY LABOR REVIEW for November, 1918, pp. 94-95.

¹⁶ For list of articles see note 2, p. 68.

Retail Prices of Dry Goods in the United States.¹

THE following table gives the average retail prices of 10 articles of dry goods on the 15th of February, May, August, and October, 1919, and on February, 15, 1920. The averages given are based on the retail prices of standard brands, only.

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON FEB. 15, MAY 15, AUG. 15, AND OCT. 15, 1919, AND FEB. 15, 1920, IN 51 CITIES.

Article.	Unit.	Atlanta, Ga.					Baltimore, Md.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.				\$0.250	\$0.250	\$0.215	\$0.150	\$0.250	\$0.250	\$0.356
Percale.....	do..	\$0.384	\$0.379	\$0.390	.390	.513	.361	.315	.407	.409	.528
Gingham, apron, 27 to 28 inch.....	do..	.274	.233	.250	.260	.344	.253	.240	.279	.289	.351
Gingham, dress, 27-inch.....	do..	.369	.343	.374	.387	.447	.323	.347	.348	.381	.423
Gingham, dress, 32-inch.....	do..	.543	.525	.536	.546	.650	.472	.531	.521	.516	.582
Muslin, bleached.....	do..	.280	.272	.328	.333	.393	.289	.273	.386	.408	.475
Sheeting, bleached, 9-4.....	do..	.744	.724	.826	.853	.972	.809	.793	.925	.919	1.153
Sheets, bleached, 81 by 90.....	Each.	1.935	1.849	2.164	2.227	2.572	1.899	1.929	2.292	2.281	2.917
Outing flannel, 27 to 28 inch.....	Yard.	.337	.293	.376	.369	.393	.298	.346	.358	.373	.437
Flannel, white, wool, 27-inch.....	do..	.750	.925	.850		.950	.945	1.100	.800	1.425	1.150
Blankets, cotton, 66 by 80.....	Pair.	5.490	4.987	6.250	5.153	5.320	5.175	5.900	5.725	7.090	7.442
		Birmingham, Ala.					Boston, Mass.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.177	\$0.150	\$0.198	\$0.222		\$0.190	\$0.190	\$0.217	\$0.210	\$0.293
Percale.....	do..	.310	.317	.413	.400	\$0.434	.346	.279	.367	.415	.456
Gingham, apron, 27 to 28 inch.....	do..	.260	.213	.269	.277	.316	.275	.250	.261	.274	.320
Gingham, dress, 27-inch.....	do..	.358	.326	.340	.359	.427	.289	.267	.293	.350	.383
Gingham, dress, 32-inch.....	do..	.518	.532	.592	.588	.662	.516	.523	.491	.545	.602
Muslin, bleached.....	do..	.263	.270	.326	.342	.355	.302	.291	.367	.398	.487
Sheeting, bleached, 9-4.....	do..	.672	.640	.751	.788	.873	.798	.752	.802	.871	.999
Sheets, bleached, 81 by 90.....	Each.	1.742	1.716	1.931	2.013	2.094	2.026	1.909	2.107	2.198	2.662
Outing flannel, 27 to 28 inch.....	Yard.	.355	.293	.366	.368	.369	.311	.312	.323	.321	.384
Flannel, white, wool, 27-inch.....	do..				.990	1.113	1.000	1.117	1.117	1.050	1.413
Blankets, cotton, 66 by 80.....	Pair.	5.475	6.560	5.573	5.998	6.484	5.783	4.750	4.750	5.714	5.230
		Bridgeport, Conn.					Buffalo, N.Y.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.190	\$0.150	\$0.210	\$0.190	\$0.220	\$0.218	\$0.178	\$0.219	\$0.199	\$0.255
Percale.....	do..	.338	.295	.385	.385	.473	.363	.308	.364	.406	.510
Gingham, apron, 27 to 28 inch.....	do..	.260	.245	.250	.262	.390	.268	.230	.256	.286	.320
Gingham, dress, 27-inch.....	do..	.325	.304	.354	.353	.433	.355	.319	.344	.360	.404
Gingham, dress, 32-inch.....	do..	.529	.501	.551	.564	.599	.578	.583	.563	.595	.545
Muslin, bleached.....	do..	.280	.275	.345	.368	.457	.288	.289	.375	.384	.447
Sheeting, bleached, 9-4.....	do..	.797	.768	.914	.921	1.197	.793	.766	.907	.947	1.089
Sheets, bleached, 81 by 90.....	Each.	1.990	1.887	2.322	2.248	2.638	1.993	1.860	2.185	2.261	2.664
Outing flannel, 27 to 28 inch.....	Yard.	.320	.289	.315	.333	.368	.343	.283	.342	.349	.392
Flannel, white, wool, 27-inch.....	do..	.783	.745	.745	.650	.625	.886	.882	.776	.987	.980
Blankets, cotton, 66 by 80.....	Pair.	4.083		4.375	5.750	6.125	6.194	6.298	6.363	6.350	6.425
		Butte, Mont.					Charleston, S.C.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.174	\$0.150	\$0.165	\$0.174	\$0.250	\$0.159	\$0.158	\$0.218	\$0.250	\$0.243
Percale.....	do..	.330	.330	.350	.388	.483	.356	.316	.408	.398	.478
Gingham, apron, 27 to 28 inch.....	do..	.250	.220	.250	.250	.280	.228	.197	.263	.273	.301
Gingham, dress, 27-inch.....	do..	.310	.328	.353	.365	.394	.333	.308	.367	.341	.435
Gingham, dress, 32-inch.....	do..	.400	.448	.463	.463	.500	.428	.432	.513	.514	.581
Muslin, bleached.....	do..	.313	.259	.333	.366	.408	.275	.244	.394	.361	.461
Sheeting, bleached, 9-4.....	do..	.808	.836	.850	.925	1.131	.745	.729	.800	.971	1.116
Sheets, bleached, 81 by 90.....	Each.	2.200	2.133	2.292	2.350	3.063	2.032	1.801	2.186	2.254	2.587
Outing flannel, 27 to 28 inch.....	Yard.	.317	.314	.326	.336	.372	.294	.280	.353	.324	.367
Flannel, white, wool, 27-inch.....	do..	.925	.920	.800	.963	1.020			1.000	.875	1.267
Blankets, cotton, 66 by 80.....	Pair.	5.817	5.800	6.150	5.800	6.800			5.000	5.738	5.550

¹ Retail prices of dry goods are published in the April, July, October, and December issues of the MONTHLY LABOR REVIEW.

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON FEB. 15, MAY 15, AUG. 15, AND OCT. 15, 1919, AND FEB. 15, 1920, IN 51 CITIES—Continued.

Article	Unit.	Chicago, Ill.					Cincinnati, Ohio.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.195	\$0.181	\$0.198	\$0.216	\$0.244	\$0.194	\$0.160	\$0.233	\$0.233	\$0.243
Percale.....	do.	.310	.348	.430	.425	.519	.295	.290	.365	.400	.470
Gingham, apron, 27 to 28 inch.....	do.	.212	.222	.242	.254	.264	.254	.230	.238	.273	.203
Gingham, dress, 27-inch.....	do.	.323	.330	.348	.368	.431	.298	.275	.323	.327	.408
Gingham, dress, 32-inch.....	do.	.626	.581	.627	.602	.711	.589	.562	.572	.596	.639
Muslin, bleached.....	do.	.300	.294	.363	.385	.407	.238	.256	.351	.346	.393
Sheeting, bleached, 9-4.....	do.	.762	.765	.936	.955	1.166	.702	.701	.826	.839	.999
Sheets, bleached, 81 by 90.....	Each.	1.932	1.831	2.301	2.244	2.753	1.901	1.830	2.019	2.283	2.499
Outing flannel, 27 to 28 inch.....	Yard.	.353	.288	.333	.347	.393	.337	.300	.319	.356	.360
Flannel, white, wool, 27-inch.....	do.	.....	.....	.915	1.375	1.750	.875	.....	1.095	.....	1.110
Blankets, cotton, 66 by 80.....	Pair.	5.433	5.394	5.830	5.765	6.194	6.375	.....	6.250	5.950	6.400
Cleveland, Ohio.						Columbus, Ohio.					
Calico, 24 to 25 inch.....	Yard.	\$0.155	\$0.150	\$0.200	\$0.180	\$0.236	\$0.180	\$0.176	\$0.196	\$0.227	\$0.200
Percale.....	do.	.315	.339	.431	.420	.526	.348	.343	.412	.421	.490
Gingham, apron, 27 to 28 inch.....	do.	.227	.250	.301	.280	.323	.285	.212	.250	.265	.350
Gingham, dress, 27-inch.....	do.	.297	.329	.358	.349	.457	.368	.354	.367	.383	.444
Gingham, dress, 32-inch.....	do.	.430	.515	.580	.626	.607	.566	.588	.619	.596	.644
Muslin, bleached.....	do.	.253	.290	.374	.384	.440	.267	.263	.405	.389	.461
Sheeting, bleached, 9-4.....	do.	.733	.758	.921	.941	1.066	.781	.726	.874	.995	1.170
Sheets, bleached, 81 by 90.....	Each.	1.650	1.777	2.200	2.243	2.710	1.919	1.877	2.114	2.306	2.722
Outing flannel, 27 to 28 inch.....	Yard.	.304	.298	.348	.354	.426	.341	.329	.378	.384	.510
Flannel, white, wool, 27-inch.....	do.	.....	.....	1.350	.....	.....	.....	.900	.....	.....	.....
Blankets, cotton, 66 by 80.....	Pair.	5.475	6.542	6.750	6.917	6.583	6.370	5.980	5.717	5.330	5.817
Dallas, Tex.						Denver, Colo.					
Calico, 24 to 25 inch.....	Yard.	\$0.183	\$0.186	\$0.190	\$0.196	\$0.250	\$0.158	.....	\$0.190	\$0.201	\$0.250
Percale.....	do.	.338	.330	.366	.375	.434	.467	\$0.360	.429	.457	.520
Gingham, apron, 27 to 28 inch.....	do.	.233	.197	.250	.250	.310	.250	.250	.333	.333	.360
Gingham, dress, 27-inch.....	do.	.330	.320	.337	.369	.431	.389	.332	.364	.393	.443
Gingham, dress, 32-inch.....	do.	.549	.527	.520	.559	.622	.717	.671	.628	.709	.772
Muslin, bleached.....	do.	.263	.254	.324	.325	.391	.309	.287	.420	.415	.474
Sheeting, bleached, 9-4.....	do.	.704	.658	.800	.855	.985	.955	.839	1.068	1.070	1.245
Sheets, bleached, 81 by 90.....	Each.	1.866	1.656	1.978	2.042	2.348	2.377	2.082	2.673	2.637	2.864
Outing flannel, 27 to 28 inch.....	Yard.	.404	.274	.335	.332	.361	.408	.356	.366	.387	.407
Flannel, white, wool, 27-inch.....	do.	.788	.....	.750	.717	.....	1.067	1.025	1.067	1.067	1.200
Blankets, cotton, 66 by 80.....	Pair.	5.920	5.667	5.930	6.950	6.725	5.958	6.057	6.233	6.381	6.343
Detroit, Mich.						Fall River, Mass.					
Calico, 24 to 25 inch.....	Yard.	\$0.227	\$0.164	\$0.198	\$0.190	\$0.250	\$0.170	\$0.170	\$0.170	.....	.....
Percale.....	do.	.336	.337	.363	.462	.472	.357	.308	.390	\$0.337	\$0.430
Gingham, apron, 27 to 28 inch.....	do.	.257	.241	.250	.260	.318	.277	.223	.270	.250	.350
Gingham, dress, 27-inch.....	do.	.332	.317	.335	.358	.396	.284	.293	.330	.342	.455
Gingham, dress, 32-inch.....	do.	.510	.489	.530	.490	.615	.510	.476	.505	.543	.610
Muslin, bleached.....	do.	.291	.291	.316	.421	.456	.301	.260	.300	.365	.443
Sheeting, bleached, 9-4.....	do.	.793	.760	.849	1.008	1.090	.863	.795	.820	.817	1.040
Sheets, bleached, 81 by 90.....	Each.	2.019	1.908	2.079	2.507	2.734	1.883	1.824	1.993	2.110	2.575
Outing flannel, 27 to 28 inch.....	Yard.	.336	.293	.317	.364	.355	.303	.297	.290	.338	.400
Flannel, white, wool, 27-inch.....	do.	.....	.995	.....	1.145	1.000	.....	.....	.....	.890	.....
Blankets, cotton, 66 by 80.....	Pair.	5.000	5.238	4.930	6.230	5.800	.....	5.980	5.980	5.903	6.173
Houston, Tex.						Indianapolis, Ind.					
Calico, 24 to 25 inch.....	Yard.	\$0.188	\$0.150	\$0.205	\$0.210	\$0.250	\$0.142	\$0.164	\$0.181	\$0.193	\$0.251
Percale.....	do.	.400	.348	.312	.388	.433	.328	.313	.358	.410	.470
Gingham, apron, 27 to 28 inch.....	do.	.270	.225	.245	.260	.290	.228	.263	.253	.270	.303
Gingham, dress, 27-inch.....	do.	.360	.297	.330	.351	.383	.305	.320	.314	.364	.411
Gingham, dress, 32-inch.....	do.	.625	.553	.604	.589	.618	.439	.468	.498	.492	.609
Muslin, bleached.....	do.	.285	.259	.310	.326	.385	.289	.292	.313	.345	.426
Sheeting, bleached, 9-4.....	do.	.713	.608	.792	.815	.975	.767	.780	.855	.894	1.066
Sheets, bleached, 81 by 90.....	Each.	1.695	1.577	1.878	2.037	2.365	1.951	1.897	2.064	2.228	2.595
Outing flannel, 27 to 28 inch.....	Yard.	.275	.265	.281	.310	.336	.328	.293	.312	.328	.379
Flannel, white, wool, 27-inch.....	do.	.670	.722	.823	.743	.910	.923	.895	.827	.895	1.250
Blankets, cotton, 66 by 80.....	Pair.	6.125	6.433	7.225	6.472	7.500	5.893	5.495	6.050	6.240	6.503

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON FEB. 15, MAY 15, AUG. 15, AND OCT. 15, 1919, AND FEB. 15, 1920, IN 51 CITIES—Continued.

Article.	Unit.	Jacksonville, Fla.					Kansas City, Mo.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.180	\$0.225	\$0.180	.....	.....	\$0.190	\$0.184	\$0.196	\$0.223	\$0.266
Percale.....	do..	.427	.445	.463	\$0.463	\$0.523	.438	.373	.458	.441	.500
Gingham, apron, 27 to 28 inch.....	do..	.290	.263	.290	.350	.390	.273	.250	.316	.316	.350
Gingham, dress, 27-inch.....	do..	.350	.370	.370	.390	.410	.386	.369	.367	.373	.450
Gingham, dress, 32-inch.....	do..	.445	.528	.542	.550	.645	.562	.610	.601	.685	.699
Muslin, bleached.....	do..	.307	.330	.413	.436	.405	.311	.324	.423	.445	.473
Sheeting, bleached, 9-4.....	do..	.775	.850	.950	.950	1.200	.818	.828	.943	.980	1.070
Sheets, bleached, 81 by 90.....	Each.	2.000	2.117	2.188	2.375	2.743	1.915	1.910	2.500	2.360	2.420
Outing flannel, 27 to 28 inch.....	Yard.	.330	.288	.330	.345	.420	.370	.351	.355	.342	.403
Flannel, white, wool, 27-inch.....	do..	.....	.650	.....	.....	1.000	.890	.....	.....	.....	.....
Blankets, cotton, 66 by 80.....	Pair..	6.500	6.500	5.740	6.500	6.500	6.480	6.000	5.745	6.660	6.250
Little Rock, Ark.						Los Angeles, Calif.					
Calico, 24 to 25 inch.....	Yard.	\$0.169	\$0.188	\$0.197	\$0.190	\$0.250	\$0.207	\$0.186	\$0.218	\$0.180	\$0.250
Percale.....	do..	.322	.322	.356	.388	.480	.439	.379	.425	.450	.500
Gingham, apron, 27 to 28 inch.....	do..	.248	.225	.250	.267	.295	.263	.263	.279	.292	.350
Gingham, dress, 27-inch.....	do..	.291	.316	.322	.336	.383	.371	.361	.391	.398	.419
Gingham, dress, 32-inch.....	do..	.468	.432	.453	.450	.538	.538	.600	.616	.611	.658
Muslin, bleached.....	do..	.249	.269	.334	.317	.405	.317	.275	.367	.385	.396
Sheeting, bleached, 9-4.....	do..	.788	.729	.899	.850	1.008	.769	.755	.806	.887	.956
Sheets, bleached, 81 by 90.....	Each.	1.759	1.819	1.936	1.975	2.330	1.968	1.853	2.025	2.177	2.368
Outing flannel, 27 to 28 inch.....	Yard.	.270	.281	.332	.342	.388	.392	.360	.385	.396	.414
Flannel, white, wool, 27-inch.....	do..	.764	1.000	1.025	1.050	1.113	.....	.900	1.300	1.200	.....
Blankets, cotton, 66 by 80.....	Pair..	4.531	5.000	5.125	4.792	5.200	6.417	6.494	6.400	6.636	6.204
Louisville, Ky.						Manchester, N. H.					
Calico, 24 to 25 inch.....	Yard.	\$0.160	\$0.190	\$0.207	\$0.222	\$0.238	\$0.161	\$0.215	\$0.232	\$0.216	\$0.286
Percale.....	do..	.348	.340	.382	.396	.530	.358	.277	.421	.381	.432
Gingham, apron, 27 to 28 inch.....	do..	.248	.202	.258	.272	.335	.261	.220	.254	.244	.303
Gingham, dress, 27-inch.....	do..	.401	.323	.361	.355	.445	.318	.281	.344	.362	.396
Gingham, dress, 32-inch.....	do..	.559	.564	.608	.634	.755	.492	.408	.557	.500	.584
Muslin, bleached.....	do..	.263	.286	.353	.352	.404	.275	.283	.380	.370	.467
Sheeting, bleached, 9-4.....	do..	.739	.730	.835	.841	.990	.734	.699	.901	.913	1.111
Sheets, bleached, 81 by 90.....	Each.	2.064	1.967	2.120	2.205	2.603	1.774	1.688	2.379	2.369	2.684
Outing flannel, 27 to 28 inch.....	Yard.	.374	.377	.328	.319	.363	.275	.277	.322	.331	.374
Flannel, white, wool, 27-inch.....	do..	.....	.....	.770	.920	1.175	.....	.....	.....	.983	1.080
Blankets, cotton, 66 by 80.....	Pair..	6.125	.....	6.342	6.500	6.993	4.779	5.426	4.794	4.988	5.615
Memphis, Tenn.						Milwaukee, Wis.					
Calico, 24 to 25 inch.....	Yard.	\$0.221	\$0.184	\$0.199	\$0.225	\$0.264	\$0.170	\$0.153	\$0.236	\$0.211	\$0.220
Percale.....	do..	.380	.356	.407	.424	.507	.335	.344	.435	.414	.538
Gingham, apron, 27 to 28 inch.....	do..	.263	.230	.260	.310	.355	.216	.226	.270	.267	.350
Gingham, dress, 27-inch.....	do..	.330	.288	.363	.366	.426	.323	.330	.350	.357	.423
Gingham, dress, 32-inch.....	do..	.553	.563	.582	.588	.687	.547	.510	.549	.548	.629
Muslin, bleached.....	do..	.285	.284	.353	.379	.435	.304	.295	.375	.381	.473
Sheeting, bleached, 9-4.....	do..	.788	.738	.909	.924	1.007	.814	.739	.860	.848	1.002
Sheets, bleached, 81 by 90.....	Each.	1.978	2.024	2.271	2.426	2.669	1.981	1.887	2.227	2.180	2.703
Outing flannel, 27 to 28 inch.....	Yard.	.331	.290	.341	.359	.383	.313	.329	.345	.313	.414
Flannel, white, wool, 27-inch.....	do..	.....	.....	.....	1.000	1.213	.600	.825	1.000	.750	.....
Blankets, cotton, 66 by 80.....	Pair..	5.777	5.921	6.280	6.209	6.987	6.520	5.904	6.058	6.300	6.593
Minneapolis, Minn.						Mobile, Ala.					
Calico, 24 to 25 inch.....	Yard.	\$0.156	\$0.166	\$0.192	\$0.171	\$0.237	\$0.190	\$0.154	\$0.225	\$0.225	\$0.253
Percale.....	do..	.357	.336	.376	.387	.423	.362	.311	.350	.405	.510
Gingham, apron, 27 to 28 inch.....	do..	.256	.237	.250	.258	.306	.243	.193	.250	.270	.316
Gingham, dress, 27-inch.....	do..	.338	.329	.349	.354	.440	.295	.304	.347	.339	.436
Gingham, dress, 32-inch.....	do..	.610	.581	.582	.634	.728	.500	.477	.530	.531	.622
Muslin, bleached.....	do..	.285	.278	.354	.380	.434	.275	.258	.346	.349	.390
Sheeting, bleached, 9-4.....	do..	.741	.698	.855	.853	1.059	.698	.595	.690	.750	.930
Sheets, bleached, 81 by 90.....	Each.	1.950	1.896	2.186	2.361	2.600	2.000	1.620	1.827	2.250	2.703
Outing flannel, 27 to 28 inch.....	Yard.	.319	.313	.354	.344	.415	.221	.276	.290	.313	.350
Flannel, white, wool, 27-inch.....	do..	.....	1.000	1.000	.....	.....	.....	.650	.675	.725	1.000
Blankets, cotton, 66 by 80.....	Pair..	5.497	5.732	5.920	5.779	6.588	6.740	.....	5.500	6.497	5.900

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON FEB. 15, MAY 15, AUG. 15,
AND OCT. 15, 1919, AND FEB. 15, 1920, IN 51 CITIES—Continued.

Article.	Unit.	Newark, N. J.					New Haven, Conn.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.173	\$0.177	\$0.198	\$0.238	\$0.250	\$0.240	.....	\$0.145	\$0.227	\$0.190
Percale.....	do.	.325	.330	.366	.408	.488	.346	\$0.321	.346	.370	.436
Gingham, apron, 27 to 28 inch.....	do.	.230	.203	.250	.250	.297	.248	.194	.241	.288	.299
Gingham, dress, 27-inch.....	do.	.284	.290	.340	.355	.402	.324	.257	.333	.362	.391
Gingham, dress, 32-inch.....	do.	.516	.533	.555	.609	.608	.528	.505	.531	.553	.581
Muslin, bleached.....	do.	.291	.317	.345	.391	.432	.286	.269	.334	.374	.423
Sheeting, bleached, 9-4.....	do.	.761	.771	.839	.845	1.004	.699	.670	.825	.824	.982
Sheets, bleached, 81 by 90.....	Each.	1.849	1.916	2.113	2.316	2.645	1.763	1.696	2.003	2.011	2.314
Outing flannel, 27 to 28 inch.....	Yard.	.307	.272	.341	.349	.382	.296	.243	.276	.310	.364
Flannel, white, wool, 27-inch.....	do.	1.450	1.250	1.220	1.220	1.500	.925	.883	.790	.935	.945
Blankets, cotton, 66 by 80.....	Pair.	4.750	4.958	5.250	5.271	5.308	4.495	4.796	4.872	5.996	5.354
		New Orleans, La.					New York, N. Y.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.150	\$0.150	\$0.269	\$0.217	\$0.242	\$0.210	\$0.205	\$0.270	\$0.250	\$0.270
Percale.....	do.	.320	.350	.450	.375	.398	.371	.343	.419	.450	.466
Gingham, apron, 27 to 28 inch.....	do.	.250	.250	.250	.290	.340	.247	.212	.290	.295	.364
Gingham, dress, 27-inch.....	do.	.283	.287	.312	.338	.374	.347	.335	.361	.390	.431
Gingham, dress, 32-inch.....	do.	.520	.508	.552	.584	.718	.777	.616	.625	.659	.718
Muslin, bleached.....	do.	.238	.227	.324	.341	.390	.288	.288	.349	.380	.449
Sheeting, bleached, 9-4.....	do.	.750	.620	.705	.784	.967	.797	.757	.892	.951	1.148
Sheets, bleached, 81 by 90.....	Each.	1.898	1.788	1.795	1.946	2.343	1.909	1.878	2.199	2.326	2.534
Outing flannel, 27 to 28 inch.....	Yard.	.350	.300	.296	.308	.373	.324	.307	.304	.338	.371
Flannel, white, wool, 27-inch.....	do.	.....	.500	.....	.590	.600	.911	1.029	.890	1.070	.944
Blankets, cotton, 66 by 80.....	Pair.	4.540	5.980	5.500	5.986	5.945	5.686	5.524	5.238	5.975	5.398
		Norfolk, Va.					Omaha, Nebr.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.220	\$0.250	.....	\$0.263	\$0.250	\$0.169	\$0.162	\$0.194	\$0.202	\$0.220
Percale.....	do.	.360	.330	\$0.460	.437	.487	.377	.348	.389	.399	.432
Gingham, apron, 27 to 28 inch.....	do.	.270	.250	.266	.305	.360	.270	.232	.270	.277	.318
Gingham, dress, 27-inch.....	do.	.336	.355	.370	.376	.404	.345	.337	.342	.346	.400
Gingham, dress, 32-inch.....	do.	.557	.536	.607	.568	.620	.595	.596	.612	.652	.703
Muslin, bleached.....	do.	.292	.277	.354	.381	.427	.317	.289	.371	.371	.426
Sheeting, bleached, 9-4.....	do.	.791	.792	.870	.873	1.025	.726	.726	.888	.895	1.114
Sheets, bleached, 81 by 90.....	Each.	1.916	1.786	2.159	2.174	2.360	1.853	2.013	2.157	2.257	2.488
Outing flannel, 27 to 28 inch.....	Yard.	.311	.310	.360	.355	.385	.346	.328	.358	.368	.395
Flannel, white, wool, 27-inch.....	do.	.875	1.125	1.125	1.125	1.050	1.125	1.150	.945	1.283	1.370
Blankets, cotton, 66 by 80.....	Pair.	5.183	5.990	6.500	6.740	6.238	6.133	6.381	5.886	6.520	6.588
		Peoria, Ill.					Philadelphia, Pa.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.213	\$0.180	\$0.169	\$0.186	\$0.203	\$0.159	\$0.207	.....	\$0.250	\$0.250
Percale.....	do.	.330	.336	.330	.340	.450	.307	.304	\$0.382	.414	.511
Gingham, apron, 27 to 28 inch.....	do.	.250	.230	.245	.248	.263	.239	.203	.280	.268	.323
Gingham, dress, 27-inch.....	do.	.335	.328	.350	.356	.412	.290	.320	.343	.344	.408
Gingham, dress, 32-inch.....	do.	.530	.581	.580	.540	.624	.534	.537	.515	.576	.653
Muslin, bleached.....	do.	.307	.277	.342	.347	.410	.283	.288	.348	.377	.446
Sheeting, bleached, 9-4.....	do.	.877	.824	1.007	.991	1.085	.761	.754	.829	.865	1.065
Sheets, bleached, 81 by 90.....	Each.	2.126	2.148	2.376	2.363	2.616	1.856	1.813	1.990	2.144	2.643
Outing flannel, 27 to 28 inch.....	Yard.	.379	.353	.353	.375	.385	.308	.285	.325	.348	.416
Flannel, white, wool, 27-inch.....	do.	.....	.....	.....	.790	.....	.938	1.070	.854	.883	1.458
Blankets, cotton, 66 by 80.....	Pair.	5.883	6.700	6.217	5.717	5.450	5.153	5.472	5.376	6.095	5.980
		Pittsburgh, Pa.					Portland, Me.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.209	\$0.167	\$0.173	\$0.199	\$0.218	.....	.....	.....	.....	.....
Percale.....	do.	.326	.310	.350	.385	.493	.....	.....	\$0.390	\$0.390	\$0.414
Gingham, apron, 27 to 28 inch.....	do.	.241	.192	.220	.274	.281	.....	.....	.250	.250	.290
Gingham, dress, 27-inch.....	do.	.305	.309	.340	.332	.393	.....	.....	.336	.330	.406
Gingham, dress, 32-inch.....	do.	.526	.541	.515	.603	.628	.....	.....	.550	.519	.646
Muslin, bleached.....	do.	.281	.267	.298	.361	.428	.....	.....	.331	.365	.425
Sheeting, bleached, 9-4.....	do.	.785	.727	.790	.917	1.063	.....	.....	.785	.814	.961
Sheets, bleached, 81 by 90.....	Each.	1.788	1.707	1.797	2.181	2.597	.....	.....	1.990	2.000	2.365
Outing flannel, 27 to 28 inch.....	Yard.	.324	.302	.333	.335	.367	.....	.....	.329	.348	.403
Flannel, white, wool, 27-inch.....	do.	.760	.785	.875	1.068	1.075	.....	.....	.....	1.250	.....
Blankets, cotton, 66 by 80.....	Pair.	5.957	5.750	3.750	5.511	5.783	.....	.....	5.400	5.625	5.375

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON FEB. 15, MAY 15, AUG. 15, AND OCT. 15, 1919, AND FEB. 15, 1920, IN 51 CITIES—Continued.

Article.	Unit.	Portland, Oreg.					Providence, R. I.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.142	\$0.148	\$0.195	\$0.188	\$0.225	\$0.186	\$0.190	\$0.230	\$0.270	\$0.270
Percale.....	do.	.400	.358	.400	.400	.464	.320	.300	.343	.383	.473
Gingham, apron, 27 to 28 inch.....	do.	.200	.200	.250	.273	.230	.240	.214	.270	.275	.337
Gingham, dress, 27-inch.....	do.	.340	.338	.350	.367	.392	.306	.316	.321	.359	.419
Gingham, dress, 32-inch.....	do.	.450	.693	.663	.496	.707	.474	.495	.560	.568	.590
Muslin, bleached.....	do.	.258	.277	.371	.349	.447	.263	.257	.349	.371	.448
Sheeting, bleached, 9-4.....	do.	.700	.700	.897	.846	.879	.724	.676	.922	.947	.986
Sheets, bleached, 81 by 90.....	Each.	1.900	1.889	2.300	2.162	2.255	2.078	1.734	2.435	2.230	2.556
Outing flannel, 27 to 28 inch.....	Yard.	.333	.335	.363	.328	.378	.323	.255	.284	.370	.417
Flannel, white, wool, 27-inch.....	do.	.....	1.100	.....	.900	1.125	.990	.915	.....	1.100	1.090
Blankets, cotton, 66 by 80.....	Pair..	.....	5.690	6.500	5.500	6.750	6.995	6.058	5.495	5.888	6.240
Richmond, Va.						Rochester, N. Y.					
Calico, 24 to 25 inch.....	Yard.	\$0.188	\$0.164	\$0.205	\$0.216	\$0.234	\$0.138	\$0.128	\$0.188	\$0.185	\$0.221
Percale.....	do.	.348	.318	.405	.384	.499	.285	.277	.387	.397	.486
Gingham, apron, 27 to 28 inch.....	do.	.247	.206	.254	.273	.290	.238	.194	.205	.248	.290
Gingham, dress, 27-inch.....	do.	.320	.290	.315	.358	.389	.309	.276	.322	.323	.384
Gingham, dress, 32-inch.....	do.	.457	.436	.489	.511	.603	.562	.561	.627	.629	.664
Muslin, bleached.....	do.	.293	.273	.369	.371	.460	.266	.246	.346	.346	.431
Sheeting, bleached, 9-4.....	do.	.787	.742	.908	.933	1.050	.696	.712	.839	.878	1.039
Sheets, bleached, 81 by 90.....	Each.	1.906	1.849	2.210	2.265	2.493	1.934	1.783	2.153	2.229	2.504
Outing flannel, 27 to 28 inch.....	Yard.	.330	.308	.348	.354	.354	.304	.282	.325	.327	.346
Flannel, white, wool, 27-inch.....	do.	.971	.852	.795	.793	1.036	1.375	.....	1.250	.....	.....
Blankets, cotton, 66 by 80.....	Pair..	5.618	5.678	5.903	5.567	5.684	6.493	5.500	5.517	6.870	7.142
St. Louis, Mo.						St. Paul, Minn.					
Calico, 24 to 25 inch.....	Yard.	\$0.208	\$0.195	\$0.220	\$0.220	\$0.250	\$0.157	\$0.156	\$0.216	\$0.231	\$0.255
Percale.....	do.	.370	.320	.430	.430	.490	.308	.296	.378	.388	.491
Gingham, apron, 27 to 28 inch.....	do.	.255	.220	.250	.280	.300	.249	.220	.240	.255	.320
Gingham, dress, 27-inch.....	do.	.334	.289	.387	.357	.448	.315	.309	.359	.374	.427
Gingham, dress, 32-inch.....	do.	.585	.594	.685	.700	.728	.541	.484	.597	.565	.644
Muslin, bleached.....	do.	.275	.249	.362	.376	.440	.324	.277	.354	.397	.469
Sheeting, bleached, 9-4.....	do.	.712	.689	.895	.922	.944	.809	.733	.895	.894	1.028
Sheets, bleached, 81 by 90.....	Each.	1.891	1.900	2.281	2.415	2.535	2.128	1.861	2.230	2.225	2.507
Outing flannel, 27 to 28 inch.....	Yard.	.328	.351	.367	.366	.372	.316	.278	.322	.328	.398
Flannel, white, wool, 27-inch.....	do.	.775	.933	.800	.925	1.050	.....	.980	.....	1.190	1.250
Blankets, cotton, 66 by 80.....	Pair..	6.690	6.500	5.245	5.250	6.930	5.971	5.698	6.675	5.942	6.613
Salt Lake City, Utah.						San Francisco, Calif.					
Calico, 24 to 25 inch.....	Yard.	\$0.169	\$0.158	\$0.190	\$0.200	\$0.220	.....	.....	\$0.367	\$0.450	.....
Percale.....	do.	.395	.351	.384	.440	.520	\$0.400	\$0.417	.400	.510	\$0.510
Gingham, apron, 27 to 28 inch.....	do.	.235	.245	.262	.266	.298	.317	.288	.320	.363	.325
Gingham, dress, 27-inch.....	do.	.349	.329	.377	.395	.409	.336	.333	.360	.397	.400
Gingham, dress, 32-inch.....	do.	.710	.635	.586	.683	.709	.550	.500	.525	.550	.621
Muslin, bleached.....	do.	.311	.294	.377	.382	.467	.210	.286	.355	.396	.417
Sheeting, bleached, 9-4.....	do.	.793	.762	.871	.945	1.078	.800	.771	.865	.950	.983
Sheets, bleached, 81 by 90.....	Each.	2.027	1.971	2.152	2.776	2.691	1.934	1.905	2.122	2.327	2.479
Outing flannel, 27 to 28 inch.....	Yard.	.382	.319	.361	.361	.441	.381	.359	.408	.405	.425
Flannel, white, wool, 27-inch.....	do.	1.350	1.258	1.750	1.593	1.590	.750	.750	1.000	1.200	1.083
Blankets, cotton, 66 by 80.....	Pair..	5.675	6.980	7.596	7.019	7.410	6.379	5.943	6.529	6.950	7.017
Savannah, Ga.						Scranton, Pa.					
Calico, 24 to 25 inch.....	Yard.	.....	.....	.....	.....	.....	\$0.188	\$0.187	\$0.207	\$0.230	\$0.273
Percale.....	do.	.....	.....	.....	.....	.....	.350	.285	.390	.395	.415
Gingham, apron, 27 to 28 inch.....	do.	.....	.....	.....	.....	.....	.336	.260	.220	.290	.297
Gingham, dress, 27-inch.....	do.	.....	.....	.....	.....	.....	.429	.220	.291	.330	.341
Gingham, dress, 32-inch.....	do.	.....	.....	.....	.....	.....	.659	.517	.493	.594	.558
Muslin, bleached.....	do.	.....	.....	.....	.....	.....	.462	.284	.282	.347	.352
Sheeting, bleached, 9-4.....	do.	.....	.....	.....	.....	.....	1.077	.777	.752	.771	.919
Sheets, bleached, 81 by 90.....	Each.	.....	.....	.....	.....	.....	2.593	1.954	1.902	2.053	2.212
Outing flannel, 27 to 28 inch.....	Yard.	.....	.....	.....	.....	.....	.419	.322	.312	.326	.335
Flannel, white, wool, 27-inch.....	do.	.....	.....	.....	.....	.....	1.250	.790	.980	.....	.868
Blankets, cotton, 66 by 80.....	Pair..	.....	.....	.....	.....	.....	7.284	5.993	6.288	6.653	5.790

AVERAGE RETAIL PRICES OF 10 ARTICLES OF DRY GOODS ON FEB. 15, MAY 15, AUG. 15, AND OCT. 15, 1919, AND FEB. 15, 1920, IN 51 CITIES—Concluded.

Article.	Unit.	Seattle, Wash.					Springfield, Ill.				
		1919				Feb. 15, 1920.	1919				Feb. 15, 1920.
		Feb. 15.	May 15.	Aug. 15.	Oct. 15.		Feb. 15.	May 15.	Aug. 15.	Oct. 15.	
Calico, 24 to 25 inch.....	Yard.	\$0.213	\$0.180	\$0.200	\$0.200	\$0.200	\$0.168	\$0.160	\$0.19	\$0.238	\$0.235
Percale.....	do.	.389	.357	.418	.430	.475	.311	.335	.330	.366	.431
Gingham, apron, 27 to 28 inch.....	do.	.250	.240	.250	.250	.350	.250	.240	.247	.257	.296
Gingham, dress, 27-inch.....	do.	.306	.328	.328	.329	.397	.321	.320	.341	.349	.397
Gingham, dress, 32-inch.....	do.	.608	.560	.558	.600	.655	.571	.499	.435	.475	.593
Muslin, bleached.....	do.	.300	.253	.403	.394	.458	.266	.262	.311	.322	.366
Sheeting, bleached, 9-4.....	do.	.855	.767	1.090	1.080	1.204	.698	.737	.820	.829	.900
Sheets, bleached, 81 by 90.....	Each.	2.200	1.929	2.850	2.827	3.011	1.780	1.967	2.081	2.095	2.350
Outing flannel, 27 to 28 inch.....	Yard.	.362	.338	.385	.370	.429	.292	.284	.321	.329	.383
Flannel, white, wool, 27-inch.....	do.	.875	.875	.925	1.000	1.675	.....	.875	.....	.....	.750
Blankets, cotton, 66 by 80.....	Pair.	6.050	5.675	6.083	5.440	6.029	4.000	4.650	5.196	5.495	6.000
Washington, D. C.											
Calico, 24 to 25 inch.....	Yard.	\$0.200	.....	\$0.175	\$0.250	\$0.250					
Percale.....	do.	.348	\$0.338	.354	.478	.503					
Gingham, apron, 27 to 28 inch.....	do.	.244	.243	.263	.297	.313					
Gingham, dress, 27-inch.....	do.	.353	.381	.371	.419	.495					
Gingham, dress, 32-inch.....	do.	.559	.534	.587	.572	.637					
Muslin, bleached.....	do.	.268	.278	.344	.365	.473					
Sheeting, bleached, 9-4.....	do.	.801	.740	.858	.930	1.141					
Sheets, bleached, 81 by 90.....	Each.	1.890	1.876	2.347	2.348	2.946					
Outing flannel, 27 to 28 inch.....	Yard.	.315	.304	.339	.348	.397					
Flannel, white, wool, 27-inch.....	do.	1.380	.....	1.250	1.250	1.000					
Blankets, cotton, 66 by 80.....	Pair.	6.500	7.500	6.156	6.408	6.483					

Index Numbers of Wholesale Prices in the United States.

AS SHOWN by information gathered in representative markets by the Bureau of Labor Statistics of the United States Department of Labor, wholesale prices in the aggregate averaged slightly higher in February, 1920, than in the preceding month. The Bureau's weighted index number, which is built on a larger number of commodities than any other currently published series, registered 249 for February, as compared with 248 for January. Articles belonging to the group of lumber and building materials exhibited the largest increase, the index number rising from 268 to 300, or nearly 12 per cent. Metals and metal products increased 7 per cent and chemicals and drugs $4\frac{1}{2}$ per cent. Somewhat smaller increases were recorded for cloths and clothing, fuel and lighting, and for house furnishings.

On the other hand, the important groups of farm products and food articles each showed a substantial decrease of more than $3\frac{1}{2}$ per cent from January to February, the index numbers dropping from 246 to 237 and from 253 to 244, respectively. In the group of miscellaneous commodities no change in average prices took place.

The following table shows the more important price changes occurring between January and February:

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN FEBRUARY, AS COMPARED WITH JANUARY, 1920, BY GROUPS OF COMMODITIES.

Increases.

Commodity.	Per cent.	Commodity.	Per cent.	Commodity.	Per cent.
<i>Farm products.</i>		<i>Cloths and clothing.—Con.</i>		<i>Metals and metal products.—Concluded.</i>	
Timothy hay.....	7.45	Cotton goods:		Steel billets.....	15.10
Goatskins.....	3.66	Blankets.....	13.80	Steel plates.....	27.70
Sheep:		Flannels.....	14.90	Steel, structural.....	4.75
Ewes.....	20.11	Hosiery, men's.....	22.40		
Lambs.....	4.72	Hosiery, women's.....	16.70	<i>Lumber and building materials.</i>	
Wethers.....	17.08	Print cloths.....	3.22	Brick, New York.....	4.15
Poultry, live:		Sheeting.....	4.63	Plate glass.....	12.90
Chicago.....	13.88	Shirting.....	3.10	Lime.....	7.80
New York.....	10.35	Thread.....	12.34	Hemlock.....	7.50
<i>Food, etc.</i>		Yarns.....	7.56	Quartered oak.....	27.65
Flour, Portland, Oreg.....	6.60	Linen shoe thread.....	8.18	Yellow pine flooring.....	24.10
Apples.....	6.06	Dress goods:		Turpentine.....	5.30
Lemons.....	39.85	French serge.....	2.84		
Oranges.....	21.33	Wool, Ohio, scoured.....	2.19	<i>Chemicals and drugs.</i>	
Raisins.....	23.92	<i>Fuel and lighting.</i>		Alcohol:	
Hams.....	3.80	Denatured alcohol.....	5.58	Grain.....	2.00
Lamb.....	10.65	Gasoline.....	3.11	Wood.....	29.90
Mutton.....	31.00	Petroleum:		Caustic soda.....	5.55
Poultry, dressed:		Crude.....	5.15	Nitrate of soda.....	16.75
Chicago.....	9.50	Refined.....	9.52	Soda ash.....	10.00
New York.....	11.22	<i>Metals and metal products.</i>		<i>Miscellaneous.</i>	
Potatoes.....	2.00	Bar iron.....	14.30	Bran.....	2.02
Vinegar.....	5.56	Iron ore.....	16.15	Lubricating oil, paraffin.....	11.11
<i>Cloths and clothing.</i>		Pig iron:			
Shoes, average.....	2.90	Basic.....	11.90		
		Bessemer.....	6.20		

Decreases.

<i>Farm products.</i>		<i>Food, etc.</i>		<i>Food, etc.—Concluded.</i>	
Cotton:		Cheese:		Fresh beef:	
New Orleans.....	2.25	Chicago.....	9.44	Chicago.....	7.40
New York.....	1.25	New York.....	6.00	New York.....	9.80
Barley.....	7.00	Coffee.....	9.20	Milk:	
Corn.....	3.68	Eggs:		Chicago.....	5.80
Rye.....	11.17	Boston.....	15.80	New York.....	5.25
Wheat:		Chicago.....	21.00	Sugar:	
No. 1 northern spring,		Cincinnati.....	23.50	96° centrifugal.....	12.40
Chicago.....	15.40	New York.....	21.57	Granulated.....	3.75
No. 2 red winter, Chicago.....	5.50	Philadelphia.....	14.78	<i>Cloths and clothing.</i>	
No. 2 hard winter, Kansas City.....	11.03	San Francisco.....	21.05	Silk, Japan, raw.....	17.02
No. 1 northern spring,		Flour, rye.....	10.75	<i>Metals and metal products.</i>	
Minneapolis.....	8.30	Flour, wheat:		Silver.....	4.00
Blue stem, Portland,		Kansas City.....	10.15	<i>Miscellaneous.</i>	
Oreg.....	6.25	Minneapolis.....	6.25	Cottonseed oil.....	9.20
Calfskins.....	11.08	St. Louis.....	4.00	Rubber, Para Island.....	6.55
Cattle.....	8.14	Lard.....	13.00		
Hogs.....	3.85	Corn meal.....	2.20		

Measured by changes in the index numbers for the 12 months from February, 1919, to February, 1920, farm products increased nearly 9 per cent in price, food 24½ per cent, and cloths and clothing 60 per cent. During the same time fuel and lighting increased nearly 11

per cent, metals and metal products $12\frac{1}{2}$ per cent, and lumber and building materials more than 84 per cent. Chemicals and drugs increased $6\frac{1}{2}$ per cent, house-furnishing goods nearly 51 per cent, and miscellaneous commodities about 9 per cent in this period.

INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED YEARS AND MONTHS, 1913, TO FEBRUARY, 1920, BY GROUPS OF COMMODITIES.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House furnishing goods.	Miscellaneous.	All commodities.
1913.....	100	100	100	100	100	100	100	100	100	100
January.....	97	99	100	103	107	100	101	100	100	100
April.....	97	96	100	98	102	101	101	100	98	98
July.....	101	102	100	99	98	101	99	100	101	100
October.....	103	102	100	100	99	98	100	100	100	101
1914.....	103	103	98	96	87	97	101	99	99	100
January.....	101	102	98	99	92	98	100	99	99	100
April.....	103	95	99	98	91	99	100	99	101	98
July.....	104	104	99	95	85	97	99	99	97	100
October.....	103	107	97	93	83	96	105	99	96	99
1915.....	105	104	100	93	97	94	114	99	99	101
January.....	102	106	96	93	83	94	103	99	100	99
April.....	107	105	99	89	91	94	102	99	99	100
July.....	108	104	99	90	102	93	108	99	98	101
October.....	105	103	103	96	100	93	124	99	99	101
1916.....	122	126	128	119	148	101	159	115	120	124
January.....	108	113	110	105	126	99	150	105	107	110
April.....	114	117	119	108	147	101	172	108	110	117
July.....	118	121	126	108	145	99	156	121	120	119
October.....	136	140	138	133	151	101	150	124	132	134
1917.....	189	176	181	175	208	124	198	144	155	176
January.....	148	150	161	176	183	106	159	132	138	151
April.....	181	182	169	184	208	114	170	139	149	172
July.....	199	181	187	192	257	132	198	152	153	186
October.....	208	183	193	146	182	134	252	152	163	181
1918.....	220	189	239	163	181	151	221	196	193	196
January.....	207	187	211	157	174	136	232	161	178	185
February.....	208	186	216	157	176	138	232	161	181	186
March.....	212	177	223	158	176	144	232	165	184	187
April.....	217	178	232	157	177	146	229	172	191	190
May.....	214	177	237	160	178	148	223	173	194	190
June.....	217	179	245	159	178	150	219	198	196	193
July.....	224	184	249	166	184	154	216	199	190	198
August.....	230	191	252	166	185	157	222	221	191	202
September.....	237	199	255	167	184	159	220	226	194	207
October.....	224	201	257	167	187	158	218	226	196	204
November.....	221	206	256	171	188	164	215	226	203	206
December.....	222	210	250	171	184	164	195	227	204	206
1919.....	234	210	261	173	161	192	179	236	217	212
January.....	222	207	234	170	172	161	191	218	212	203
February.....	218	196	223	169	168	163	185	218	208	197
March.....	228	203	216	168	162	165	183	218	217	201
April.....	235	211	217	167	152	162	178	217	216	203
May.....	240	214	228	167	152	164	179	217	213	207
June.....	231	204	258	170	154	175	174	233	212	207
July.....	246	216	282	171	158	186	171	245	221	218
August.....	243	227	304	175	165	208	172	259	225	226
September.....	226	211	306	181	160	227	173	262	217	220
October.....	230	211	313	181	161	231	174	264	220	223
November.....	240	219	325	179	164	236	176	299	220	230
December.....	244	234	335	181	169	253	179	303	220	238
1920:										
January.....	246	253	350	184	177	268	189	324	227	248
February ¹	237	244	356	187	189	300	197	329	227	249

¹ Preliminary.

Comparison of Retail Price Changes in the United States and Foreign Countries.

THE index numbers of retail prices published by several foreign countries have been brought together with those of this Bureau in the subjoined table after having been reduced to a common base, viz, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers compiled by the Bureau, because of the fact that in some instances satisfactory information for 1913 was not available. For Belgium, Denmark, Great Britain, Norway, Sweden, and the city of Rome, Italy, the index numbers are reproduced as published in the original sources. With two exceptions all these are shown on the July, 1914, base in the source from which the information is taken. The index numbers for Belgium are computed on April, 1914, as the base period, while those for Rome are based on the first half of 1914. The index numbers here shown for the remaining countries have been obtained by dividing the index for July, 1914, or the nearest period thereto, as published, into the index for each month specified in the table. As shown in the table, the number of articles included in the index numbers for the different countries differs widely. These results should not, therefore, be considered as closely comparable one with another. In one or two instances the figures here shown are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities included at successive dates.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND CERTAIN OTHER COUNTRIES.

[July, 1914=100.]

Year and month.	United States: 22 foodstuffs; 45 cities. Weighted.	Australia: 46 foodstuffs; 30 towns. Weighted.	Belgium: 22 articles and rent, Brussels. Not weighted.	Canada: 29 foodstuffs; 60 cities. Weighted.	Denmark: Family food budget; 5 persons. Weighted.	France: Family budget, 13 articles.		Great Britain: 21 foodstuffs; 600 towns. Weighted.
						Cities over 10,000 population (except Paris). Weighted.	Paris only. Weighted.	
1914.								
July.....	100	100	¹ 100	100	100	² 100	100	100
October.....	103	99	.....	108	.....	.....	.....	112
1915.								
January.....	101	107	.....	107	.....	² 110	120	118
April.....	97	113	.....	105	.....	.....	114	124
July.....	98	131	.....	105	128	² 123	120	132½
October.....	101	133	.....	105	.....	.....	118	140
1916.								
January.....	105	129	.....	112	.....	² 133	134	145
April.....	107	131	.....	112	.....	² 137	132	149
July.....	109	130	.....	114	146	² 141	129	161
October.....	119	125	.....	125	.....	² 146	135	168
1917.								
January.....	125	125	.....	138	.....	² 154	139	187
February.....	130	126	.....	141	153	.....	.....	189
March.....	130	126	.....	144	.....	.....	.....	192
April.....	142	127	.....	145	.....	² 171	147	194
May.....	148	127	.....	159	.....	.....	.....	198
June.....	149	127	.....	160	.....	.....	.....	202
July.....	143	126	.....	157	166	² 184	183	204
August.....	146	129	.....	157	.....	.....	.....	202
September.....	150	129	.....	157	.....	.....	.....	206
October.....	154	129	.....	159	.....	² 200	184	197
November.....	152	129	.....	163	.....	.....	.....	206
December.....	154	128	.....	165	.....	.....	.....	205
1918.								
January.....	157	129	.....	167	.....	² 211	191	206
February.....	158	130	.....	169	173	.....	.....	208
March.....	151	131	.....	170	.....	.....	.....	207
April.....	151	131	.....	169	.....	² 232	218	206
May.....	155	132	.....	171	.....	.....	.....	207
June.....	159	132	.....	172	.....	.....	.....	208
July.....	164	131	.....	175	.....	² 244	206	210
August.....	168	128	.....	181	187	.....	.....	218
September.....	175	128	.....	179	.....	.....	.....	216
October.....	177	131	.....	182	.....	² 260	238	229
November.....	179	133	.....	182	.....	.....	.....	233
December.....	183	134	.....	184	.....	.....	.....	229
1919.								
January.....	181	140	699	186	186	² 277	248	230
February.....	169	141	564	181	.....	.....	227	230
March.....	172	143	403	176	.....	.....	248	220
April.....	178	145	344	180	.....	² 293	257	213
May.....	181	146	333	182	.....	.....	268	207
June.....	180	147	357	185	.....	.....	264	204
July.....	186	147	367	186	212	² 288	261	209
August.....	188	148	361	195	.....	.....	238	217
September.....	184	148	350	193	.....	.....	259	216
October.....	184	156	346	192	.....	² 301	283	222
November.....	188	158	351	192	.....	.....	.....	231
December.....	193	.....	359	198	.....	.....	.....	234

¹ April, 1914.² Quarter beginning that month.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND CERTAIN OTHER COUNTRIES—Concluded.

Year and month.	Italy.		Netherlands: 27 foodstuffs; Amsterdam. Not weighted.	New Zealand: 59 foodstuffs; 25 towns. Weighted.	Norway: Family food budget. Weighted.	Spain: 12 foodstuffs; provincial capitals. Not weighted.	Sweden: 21 articles; 44 towns. Weighted.	Switzerland: 9 groups of foodstuffs. Not weighted.
	7 foodstuffs; 40 cities (variable). Not weighted.	Rome: Family food budget; 5 persons. Weighted.						
1911.								
July.....	100	\$ 100	\$ 100	100	100	\$ 100	100	\$ 100
October.....	104			102			107	\$ 103
1915.								
January.....	108	95		111		\$ 101	113	\$ 107
April.....	113	107		113			121	\$ 114
July.....	120	95		112		\$ 105	124	\$ 119
October.....	127	100		112			125	\$ 120
1916.								
January.....	133	111		115		\$ 110	130	\$ 123
April.....	132	116		118			134	\$ 129
July.....	132	111		119	\$ 109	\$ 113	142	\$ 140
October.....	132	111		120			152	\$ 144
1917.								
January.....	144	124		127		\$ 116	160	\$ 143
February.....	154	127		124			190	
March.....	161	121		125			179	153
April.....	164	124		127			175	
May.....	167	124		125			175	
June.....	171	125		128			175	179
July.....	172	137		127		\$ 127	177	
August.....	178	143		127	214		181	
September.....	188	142		129			187	192
October.....		148		130			192	
November.....	197	150		130			200	
December.....	199	157		132			212	197
1918.								
January.....	191	177		133		\$ 130	221	
February.....	221	181		134			227	
March.....	247	199		144			236	204
April.....	236	200		137			247	
May.....		202		139			254	
June.....	239	199		139			261	230
July.....	266	206		139	209	\$ 161	268	
August.....		208		141			290	
September.....	267	214		141			294	261
October.....		220		142			310	
November.....		249		144	205		320	
December.....		264		160	276		330	252
1919.								
January.....		290	143	145	279	\$ 157	330	
February.....		298	202	149	278		340	
March.....		29	203	149	278		340	260
April.....	261	2	197	145	278		347	
May.....		202	18	145	277		351	
June.....		204	204	146	280		354	261
July.....		205	206	146	281		356	
August.....		207	207	147	281		357	
September.....		208	208	147	281		357	
October.....		209	209	148	281		357	
November.....		210	209	148	281		357	
December.....		211	209	148	281		357	

* January-July.
* Year 1913.* April-September.
* Previous month.* January-July.
* Previous month.

* August.

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase over July, 1914, in the cost of food and general family expenditure for March of each year, 1915 to 1920, and for each month in 1920. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or frozen; bacon; fish; flour; bread; tea; sugar; milk; butter, fresh and salt; cheese; margarine; eggs; and potatoes.

The table gives percentage of increase and is not one of relative prices. To obtain the relative prices it is necessary to add 100 to the percentage as given, e. g., for January, 1920, the increase in cost of food was 136 per cent, the relative price being 236.

The figures represent two comparisons: First, the increase in prices, based on the same kinds and quantities as used in July, 1914; second, the increase, based on the change in the standard of living, resulting from a substitution of one kind of food for another to meet war-time conditions.

The table shows that retail prices of food were 133 per cent higher in March, 1920, than in July, 1914, and that the increased cost of all items in the family budget was 130 per cent. On account of the lower standard of living at the later date the expenditures of wage earners for food increased only 107 per cent and for all items in the family budget 115 per cent during the same period.

PER CENT INCREASE IN COST OF FOOD AND ALL ITEMS IN FAMILY BUDGET IN GREAT BRITAIN BASED ON JULY, 1914.

[Compiled from the British Labor Gazette.]

Year and month.	Food.		All items in family budget.	
	Retail prices (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in con- sumption).	Cost (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in con- sumption).
March, 1915.....	24			
March, 1916.....	48			
March, 1917.....	92	135	85	
March, 1918.....	107	85	90	50-55
March, 1919.....	120	79	115	90
1920.				
January.....	136	115	125	115
February.....	135	112	130	115
March.....	133	107	130	115

¹ Approximate increase if standard of consumption is changed as follows: Eggs omitted; margarine substituted for butter; sugar and fish consumption cut one-half.

² Not including taxes.

³ Based on change in standard of food consumption adopted by the Ministry of Food.

⁴ Including taxes.

⁵ The increase, excluding additional taxation, is 7 per cent less.

Cost of Living in Italy.

A RECENT number of the municipal monthly bulletin of the city of Milan¹ contains three tables showing the increase in the cost of living in Milan during 1918 and 1919. The first of these three tables gives the total weekly expenditure of a workman's family of 5 persons (2 adults, 1 child 10 to 15 years of age, and 2 children under 10 years) for food, clothing, housing, light, fuel, and miscellaneous items for each month of 1918 and 1919 in comparison with the average weekly expenditure during the first six months of 1914.

TABLE 1.—WEEKLY COST OF LIVING OF A WORKMAN'S FAMILY IN MILAN, ITALY, FOR EACH MONTH OF 1918 AND 1919, COMPARED WITH THE AVERAGE PER WEEK FOR THE FIRST SIX MONTHS OF 1914.

[One lire at par=19.3 cents.]

Month and year.	Amount.	Per cent increase over first 6 months of 1914.
Average first 6 months of 1914.....	<i>Lire.</i> 41.20	.....
1918.		
January.....	68.42	66
February.....	66.55	62
March.....	68.04	65
April.....	71.70	74
May.....	75.35	83
June.....	85.47	107
July.....	84.35	105
August.....	97.98	138
September.....	114.16	177
October.....	102.49	149
November.....	102.97	150
December.....	106.85	159
1919.		
January.....	107.18	160
February.....	110.81	169
March.....	108.03	162
April.....	106.49	158
May.....	117.21	184
June.....	120.05	191
July.....	109.24	165
August.....	108.07	162
September.....	111.47	170
October.....	117.74	185
November.....	118.53	187
December.....	118.16	187

According to the preceding table the cost of living curve showed a continuous upward tendency in 1918 up to September. In that month it reached its highest level, the cost of living being 177 per cent greater than the average cost for the first six months of 1914. In October, 1918, the corresponding increase was only 149 per cent, and up to May, 1919, the cost of living remained below the high level of September, 1918. In May, 1919, it showed an increase of 184 per

¹Città di Milano. Bollettino Municipale Mensile di Cronaca Amministrativa e di Statistica, vol. 25, No. 12. Milan, December 31, 1919. pp. 531, 532.

cent over the average for the first six months of 1914, and in June, 1919, it rose to the highest point of the year, the increase in that month over the 1914 figures amounting to 191 per cent. In July and August, 1919, there was a slight decrease, but in September it began again to rise, and in November and December it was 187 per cent greater than in the first half of 1914.

Table 2 shows the average weekly budget of a workman's family, and Table 3 shows the average weekly expenditure for food during December, 1919. The weekly expenditures for December, 1919, is compared with the average weekly expenditure for the first six months of 1914 and an index number is computed by assuming the latter expenditure to be equal to 100. Table 3 in which the articles of food are itemized, also shows the quantities of each foodstuff consumed and the price per unit. The quantities shown as consumed in 1914 are based on an investigation made in 1913. Owing to the rationing of certain foodstuffs in December, 1919, and the scarcity of certain nonrationed foodstuffs the quantities consumed weekly in December, 1919, are not the same as those consumed per week during the first six months of 1914. For this reason the table shows first what the weekly expenditure would have been in December, 1919, if the normal quantities of food consumed in 1914 had been consumed in December, 1919, and secondly the actual expenditure in December, 1919, for those quantities of food which were consumed.

TABLE 2.—AVERAGE WEEKLY BUDGET OF A WORKMAN'S FAMILY IN MILAN, ITALY, IN DECEMBER, 1919, COMPARED WITH THE AVERAGE WEEKLY BUDGET OF THE FIRST SIX MONTHS OF 1914.

[One lire at par=19.3 cents.]

Item.	Average weekly expenditure.					
	First six months of 1914.		December, 1919.			
	Amount.	Per cent.	Based on normal consumption of food.		Based on actual consumption of food.	
			Amount.	Per cent.	Amount.	Per cent.
	<i>Lire.</i>		<i>Lire.</i>		<i>Lire.</i>	
Food.....	25.58	62.09	101.15	69.72	74.23	62.83
Clothing.....	4.94	12.00	18.50	12.76	18.50	15.66
Rent.....	4.70	11.40	5.09	3.50	5.09	4.30
Fuel and light.....	1.86	4.51	4.09	2.82	4.09	3.46
Miscellaneous.....	4.12	10.00	16.25	11.20	16.25	13.75
Total.....	41.20	100.00	145.08	100.00	118.16	100.00
Index number.....	100.00		352.13		286.80	

TABLE 3.—AVERAGE WEEKLY EXPENDITURE FOR FOOD OF A WORKMAN'S FAMILY IN MILAN, ITALY, IN DECEMBER, 1919, COMPARED WITH THE AVERAGE WEEKLY EXPENDITURE OF THE FIRST SIX MONTHS OF 1914.

[1 kilogram=2.20462 pounds; 1 liter=1.0567 quarts; 1 lira at par=19.3 cents.]

Item.	Unit.	First 6 months of 1914.			December, 1919.			
		Average weekly consumption.	Price.	Weekly expenditure.	Average weekly consumption.	Price.	Weekly expenditure.	
							Based on normal consumption.	Actual.
<i>Rationed articles.</i>								
Bread.....	Kilogram..	9.890	<i>Lire.</i> 0.47	<i>Lire.</i> 4.69	9.590	<i>Lire.</i> 0.83	<i>Lire.</i> 8.13	<i>Lire.</i> 7.96
Farinaceous foods.....	do.....	1.617	.66	1.07	1.691	1.25	2.02	2.11
Rice.....	do.....	2.415	.40	.97	1.691	1.25	3.02	2.11
Sugar.....	do.....	.770	1.27	.98	.790	4.64	3.57	3.67
Butter.....	do.....	.364	3.25	1.18	.226	11.75	4.28	2.66
Oil.....	do.....	.238	2.60	.62	.113	5.50	1.31	.62
Bacon.....	do.....	.483	2.05	.99	.339	8.50	4.10	2.88
Cheese, hard.....	do.....				.113	8.40		.95
Tunny in oil.....	do.....				.057	10.00		.57
Total.....				10.41			26.43	23.53
<i>Nonrationed articles.</i>								
Lard and other fats.....	Kilogram..	.021	1.70	.04	.600	8.60	.17	5.16
Cheese, various.....	do.....	.531	3.20	1.70	.290	7.40	4.19	1.48
Salt pork.....	do.....	.084	2.20	.18		8.50	.71	
Milk.....	Liter.....	5.894	.30	1.77	4.000	.86	5.07	3.44
Beans.....	Kilogram..				1.500	2.60		3.90
Tripe.....	do.....	.028	.90	.03	.309	2.25	.07	.68
Sausage.....	do.....	.280	4.00	1.15	.200	14.43	4.04	2.89
Fish, fresh, dried, and preserved.....	do.....	.081	2.50	.21		6.00	.50	
Eggs.....	Each.....	10.500	.08	.84	4.000	.70	7.35	2.80
Meat, beef.....	Kilogram..	2.695	1.40	3.77	1.200	16.20	19.40	7.44
Meat, various.....	do.....				1.200	6.80		8.16
Chocolate.....	do.....	.028	4.00	.11		8.00	.22	
Potatoes.....	do.....	2.499	.13	.32	4.000	.67	1.67	2.68
Vegetables.....	do.....	7.000	.30	2.10	1.000	2.50	17.50	2.50
Fruit, fresh.....	do.....	.896	.68	.61	.500	3.50	3.14	1.75
Catsup.....	do.....	.077	1.20	.09	.100	2.18	.17	.22
Coffee, and coffee substitutes.....	do.....	.154	4.00	.62		19.00	2.93	
Flour, wheat.....	do.....	.231	.50	.12		.80	.18	
Corn meal.....	do.....	.266	.25	.07	.500	.80	.21	.40
Wine.....	Liter.....	3.000	.49	1.47	3.000	2.40	7.20	7.20
Grand total, all items.....				25.58			101.15	74.23
Index number.....				100.00			395.43	290.19

¹ Average price of all grades of fresh beef and veal.² Average price of all grades of fresh beef.

A study of the data contained in Table 2 and Table 3 reveals in the first place the remarkable fact that even in prewar times, i. e., during the first half of 1914, 62.09 per cent of an Italian workman's family budget covered expenditures for food. Had the consumption of food been normal in December, 1919, the expenditures for food would have formed 69.72 per cent of the total budget, but, owing to rationing, the consumption of food decreased, so that the percentage for December, 1919, was 62.83. The expenditures for clothing formed 12 per cent of the budget in 1914 and 15.66 per cent in December, 1919, while the percentages for miscellaneous expenditures were

10 and 13.75, respectively. The percentages formed by expenditures for rent and for fuel and light have decreased, the former from 11.4 to 4.3 and the latter from 4.51 to 3.46. The decrease of the percentage for rent is due to the fact that, while the price of all other necessities increased enormously during the war, rents remained nearly stationary owing to legislation preventing increases.

From the table showing the itemized expenditures for rationed and nonrationed foodstuffs it becomes evident that with respect to rationed foodstuffs there was a considerable decrease in the consumption of rice, butter, oil, and bacon. As regards nonrationed foodstuffs, the decrease of consumption was greatest in the case of vegetables, i. e., from 7 kilograms to 1 kilogram (15.4 to 2.2 pounds). This decrease was partly made up by an increased consumption of dried beans and potatoes. The consumption of milk decreased from 5.894 to 4 liters (6.23 to 4.23 quarts). Salt pork, fresh, dried, and preserved fish (with the exception of tunny), chocolate, coffee, and wheat flour while consumed in 1914, disappeared entirely from the list of articles used in December, 1919. The largest items of the weekly food budget in December, 1919, were the expenditures for meat (not including bacon and sausage), 15.60 lire; bread, 7.96 lire; wine, 7.20 lire; lard and other fats, 5.16 lire; beans, 3.90 lire; sugar, 3.67 lire; and milk, 3.44 lire.

The average per cent of expenditure in December, 1919, for the principal groups of items of cost of living of a workman's family in Milan, Italy, is compared in Table 4 with the estimated per cent of expenditure of white families in industrial centers of the United States in October, 1919, as published in the MONTHLY LABOR REVIEW for January, 1920 (p. 98).

TABLE 4.—COMPARATIVE PER CENT OF FAMILY EXPENDITURE FOR THE SEVERAL ITEMS OF EXPENSE IN ITALY AND THE UNITED STATES, 1919.

Item.	Per cent of total expenditure.	
	Milan, Italy, December, 1919.	United States, October, 1919.
Food.....	62.83	38.2
Clothing.....	15.66	16.6
Rent.....	4.30	13.4
Fuel and light.....	3.46	5.3
Furniture and furnishings.....	13.75	5.1
Miscellaneous.....		21.3
Total.....	100.00	100.0

This comparison shows that the average relative expenditure of Italian families for food was much larger and that for rent, fuel and light, and miscellaneous items considerably smaller than the expendi-

ture of American families for the same items, and that the relative expenditure for clothing was nearly the same in the case of urban families of both nations.

Cost of living in Germany, 1914 to 1919.

THE Deutscher Reichsanzeiger (Berlin) for December 19, 1919, publishes the following table showing the estimated amounts required to purchase the "standard food budget" used by Calwer as the basis of his series of computations at the prices prevailing at various dates. The figures represent the estimated weekly cost of food needed by a family of four persons in specified months of the years 1914 to 1919. These figures are based on the average of the official maximum prices from about 200 localities and on the peace-time ration of a seaman in the German Navy.

ESTIMATED WEEKLY COST OF FOOD REQUIRED BY A GERMAN FAMILY OF FOUR PERSONS DURING SPECIFIED MONTHS OF THE YEARS 1914 TO 1919.

[1 mark at par=23.8 cents.]

Month.	1914	1915	1916	1917	1918	1919	Per cent of increase, 1919 over 1914.
	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	
January.....	25.57	29.65	41.26	53.67	56.50	63.65	149
February.....	25.29	31.49	43.40	54.15	56.47	64.93	157
March.....	25.08	32.90	43.47	54.69	57.00	67.30	168
April.....	24.96	34.41	51.78	54.81	57.13	69.65	179
May.....	24.70	35.49	52.29	54.58	57.30	73.70	198
June.....	24.73	37.36	52.61	54.34	57.60	78.65	218
July.....	25.12	38.16	53.47	55.26	58.11	82.51	228
August.....	26.41	39.13	53.53	54.67	59.43	85.45	224

Thus the increase in the cost of food in August, 1919, as compared with August, 1914, amounted to 224 per cent. It is stated that since the beginning of the war the cost of rationed foodstuffs had increased more than three times up to August, 1919, and that since then the prices of fats, eggs, bread, flour, potatoes, milk, etc., have risen considerably. These articles are not the only necessities that have undergone heavy price increases. For example, the rise in the prices of clothing and shoes has been extraordinary. A man's suit, which before the war cost from 70 to 80 marks (\$16.66 to \$19.04, par), cost 600 marks (\$142.80, par) a year ago and now costs 1,000 marks (\$238, par).

According to the Statistical Yearbook for 1919, just issued by the Bavarian Statistical Department, the rise in prices in Munich between July, 1914, and November, 1919, is shown in the following table

taken from Münchner Neueste Nachrichten (Munich) for December 10, 1919:

PER CENT OF INCREASE OF PRICES OF SPECIFIED COMMODITIES IN MUNICH IN NOVEMBER, 1919, OVER JULY, 1914.

Article.	Percent of increase.	Article.	Per cent of increase.
Wheat flour.....	400	Petroleum.....	95
Rye bread.....	125	Men's shoes.....	1,180
Milk.....	172	Men's suits.....	400
Butter.....	150	Coffee cups (earthenware).....	990
Cheese, Limburger.....	133	Plates (earthenware).....	1,087
Cheese, Emmenthaler.....	66	School slates.....	660
Eggs.....	200	School exercise books.....	250
Beef.....	216	Pencils.....	260
Veal.....	165	Ink.....	650
Pork.....	485	Beechwood.....	490
Wheat groats.....	360	Pine wood.....	426
Pearl barley.....	255	Coal, Bavarian.....	480
Loaf sugar.....	340	Coal, Silesian.....	342
Beer.....	71	Coal, Ruhr, hard.....	235
Vinegar.....	408	Lignite briquets.....	400
Methylated spirits.....	328		

WAGES AND HOURS OF LABOR.

Wages and Hours in Paper-Box, Women's Clothing, Confectionery, and Overalls Industries.

THIS article presents a summary report on the results of the investigation of wages and hours in the manufacture of paper boxes, of women's clothing, of confectionery, and of overalls. The investigation was a part of the industrial survey of 1919. In the investigation of the paper-box industry were included establishments manufacturing folding boxes, i. e., boxes that are shipped flat to the purchaser, and set-up boxes, or those shipped in the form of made-up boxes. The investigation of the women's clothing industry covered the manufacture of children's dresses, of house dresses and kimonos, of cloaks, suits and skirts, of dresses and waists, and of white goods. These divisions of the two industries named correspond to divisions generally recognized in the trades.

In tabulating the material the occupations of each of the subdivisions of the women's clothing industry are given separately, except that the manufacture of children's dresses is combined with that of house dresses and kimonos. In the paper-box industry such occupations as are fairly comparable in the two divisions of the industry are given once for both, while those peculiar to each branch of the industry are given separately, under the appropriate subheading.

In selecting the establishments to be covered by the survey the attempt was made to include enough in each State to give fairly typical results for the State. No attempt was made to apportion the representation in each State exactly in relation to the number of employees in the State. The number of establishments and the number of employees included in the investigation of each industry is shown by States in Table 1.

TABLE 1.—NUMBER OF ESTABLISHMENTS AND NUMBER OF EMPLOYEES, BY INDUSTRY AND STATE.

State.	Paper boxes.		Women's clothing.		Confectionery.		Overalls.	
	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.
California.....					12	731	5	493
Connecticut.....	6	455			2	189	5	274
Georgia.....					8	2,353	9	381
Illinois.....	7	783	27	1,456	3	234	9	595
Indiana.....					3	180	8	298
Iowa.....					2	378		
Kentucky.....								

TABLE 1.—NUMBER OF ESTABLISHMENTS AND NUMBER OF EMPLOYEES, BY INDUSTRY AND STATE—Concluded.

State.	Paper boxes.		Women's clothing.		Confectionery.		Overalls.	
	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.	Number of establishments.	Number of employees.
Maryland.....			10	229	3	664	5	254
Massachusetts.....	8	746	15	606	6	2,988	7	167
Michigan.....	5	336			2	192	3	542
Minnesota.....					6	334	8	177
Missouri.....	6	227	15	864	7	1,432	7	415
New Jersey.....	8	441			2	254	5	313
New York.....	14	1,692	44	2,995	8	2,149	10	422
North Carolina.....							3	202
Ohio.....	12	754	25	2,350			10	527
Oregon.....					8	812		
Pennsylvania.....	11	353	24	1,422	3	154		
Tennessee.....					12	1,697	8	273
Texas.....					2	183	7	391
Virginia.....							9	382
Washington.....							3	521
Wisconsin.....	3	326			5	253		
Total.....	80	6,113	160	9,022	71	16,086	131	6,911

Because of the conditions under which the survey was carried out it was impossible to obtain the records of all establishments even in a single industry for the same pay-roll period. Owing to the unsettled state of industry immediately after the close of the war, conditions changed so rapidly that the exact date of the material presented is a matter of more importance than it would be in a normal year. The pay-roll periods included in each industry were distributed by months, as shown in Table 2:

TABLE 2.—NUMBER OF PAY-ROLL PERIODS IN SPECIFIED MONTHS, BY INDUSTRY.

Industry.	Total number of pay-roll periods.	Number of pay-roll periods in—							
		1918		1919					
		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.
Paper box.....	80			43	6	16	12	3	
Women's clothing.....	160		2	30	84	21	23		
Confectionery.....	101	2		8	21	32	30	8	
Overalls.....	131			3	2	9	38	70	9

It will be seen from the table that in the paper-box industry 77 of the 80 pay-roll periods fell within the first four months of 1919; in the women's clothing industry 158 of the 160 pay-roll periods fell within the same time limits; in the confectionery industry the proportion is 91 out of 101 periods; while in the overalls industry 126 out of the 131 pay-roll periods fell in the months of March, April, May, and June, 1919. Information is presented as of the year 1919. In none of the industries, so far as could be ascertained, were there any changes in rates of wages during the progress of the survey.

Method of Gathering and Computing Data.

THE information concerning hours and earnings on which the tables are based was obtained directly from the pay rolls or other records of the companies by agents of the Bureau. Other information was obtained from responsible officials in personal interviews. Wherever the records of the company failed to indicate the time actually worked by pieceworkers during the selected pay-roll period, arrangements were made to have such a record kept for a future period from which record data were afterwards copied. In all cases the figures copied by the agents represented hours actually worked and earnings actually received.

As the material comes to the Bureau the figures for hours and those for earnings are both in incommensurable form on account of inequalities in the length of pay-roll periods and in the time worked by different individual employees. Before they can be presented in tabular form it is necessary to reduce both hours and earnings to a common denominator. The comparable figures selected for use in the following tables are hours worked per day and per week, and earnings per hour and per week. These figures are obtained in the manner described in the following paragraphs:

The hours per day of each employee are obtained by dividing the number of hours worked by him during the pay-roll period by the number of week days, holidays omitted, in the pay-roll period. Thus in the case of pay rolls for a single week containing no holidays, the hours worked by each employee during the pay-roll period are divided by six, whether the employee worked on each of the six days or not. Similarly the hours actually worked by an employee in any establishment during a pay-roll period containing 13 work days were divided by 13, regardless of the number of days on which the employee worked. The resulting figure represents the number of hours per day that the employee would have worked, if his work time had been distributed uniformly among the week days of the pay-roll period.

Of the pay rolls included in the survey of those industries nearly all covered a single week. In the paper-box industry there were 75 one-week pay-roll periods and 5 two-week periods. In the women's clothing industry all of the 160 pay rolls were for a single week. In the confectionery industry 97 were for one week and 4 for two weeks, while in the overalls industry the corresponding figures were 112 for one week, 18 for two weeks, and one for a 14-day period.

By using the average number of hours per week day as a factor it is possible to obtain a figure for the average number of hours worked per week by multiplying that factor in every case by six. With one-week pay rolls the result agrees with the original figure for hours per week actually worked. In the case of longer pay rolls, however,

the resulting figure is hypothetical. It represents the number of hours per week that the employees would have worked in a six-day week if their working hours had been distributed uniformly over the week days of the entire pay-roll period.

This figure of hours worked per week is no more useful for comparisons of hours in different occupations or industries than is the figure of hours per day. It has the advantage, however, of enabling comparisons to be drawn between the hours actually worked on the average by people in each occupation and the full-time hours of the same occupation.

By full-time hours per week is meant the number of hours that is thought of in the occupation as constituting a normal week's work—the number of hours the employee regularly expects to work and the employer expects him to work. This figure was obtained from the officials of the various establishments by the agents of the Bureau. The difference between average actual hours per week and average full-time hours per week is an indication of the degree of irregularity of employment among the employees to whom the figures apply.

Combining hours per day or hours per week computed from the records of one-week pay rolls with those computed from longer pay rolls introduces a disturbing factor which must not be lost sight of in using the figures for comparative purposes. The figures for a group of employees computed for four weeks combined will differ from those computed for the same group of employees for any one of the four weeks separately. This difference is always in the same direction, though varying in amount. The causes and the extent of it are discussed at some length in an article in the MONTHLY LABOR REVIEW for January, 1920 (pp. 121, 122).

The conclusion of that discussion is stated in the following words:

For these reasons it is inadmissible to use the figures of average hours per week day or average hours per week for very close comparisons, without making allowance for the relative number of short and long pay-roll periods on which the averages are based. For practical purposes, however, the figures are sufficiently comparable to give a fairly accurate representation of relative hours of labor in different States, industries or occupations, and of the percentage of the full time of each occupation which the employees in that occupation actually worked.

For comparative purposes the earnings of each employee are reduced to the form of average earnings per hour by dividing his total earnings for the pay-roll period by the total number of hours worked by him during the period. The resulting figure indicates how much he would have earned each hour he worked if his earnings had been distributed uniformly over all the hours actually worked by him during the period.

By multiplying the average hourly earnings of a group by the previously computed average hours per week worked by the same group, a figure is obtained which represents very closely the average

actual weekly earnings of the group. In the case of one-week pay rolls this process brings us back practically to the average actual earnings for the week as computed directly from the actual earnings of the individual employees as reported on the schedules. For employees with longer pay-roll periods, however, the average is not the average of what was actually earned in any one week, but the average of what would have been earned if they had worked the same number of hours on each week day of the pay-roll period. In some respects it is a more significant figure than the actual earnings of a single week. For in general the longer the pay-roll period from which average weekly earnings are computed the more nearly typical may the resulting average be assumed to be.

One other somewhat variable factor involved in the figure for average actual weekly earnings should be pointed out. The practice of working fewer hours on Saturday than on other week days, while by no means universal, is widely prevalent; and the number of hours worked on Saturday varies more or less from establishment to establishment. Whenever fewer hours are worked on Saturday than on other days the theoretical figure for actual weekly earnings described above will express exactly what it professes to express (namely, the amount that would have been earned in a week if the earnings had been uniformly distributed) only in the case of employees for whom Saturdays constituted one-sixth of the total number of days worked by them. In all other cases the figure will vary by a few cents from theoretical exactness. If the number of Saturdays exceeds one in six, the computed weekly earnings will be somewhat too low; if the number is less than one in six, the earnings will be correspondingly high. Careful experiment has shown, however, that these variations offset one another so largely that the net result is a variation of a few cents at the most in the weekly average for the group, a variation so slight that it may be entirely disregarded.

Hours and Earnings of Employees in the Four Industries.

IN TABLE 3 are presented the facts as to hours and earnings of male and female employees in the four industries under consideration. In each industry the figures are given for the whole country for each of the occupations listed in the survey. Figures for each State separately as well as other details concerning each industry will appear later in separate bulletins.

The figures in each column are to be interpreted in the light of the explanations given in the preceding paragraphs. In the column immediately following that showing average full-time hours per week is shown the percentage which the average hours worked constituted of such full-time hours. In view of the explanation already given the figures presented in the table may be left to tell their own story.

TABLE 3.—AVERAGE HOURS AND EARNINGS IN THE PAPER-BOX, WOMEN'S CLOTHING, CONFECTIONERY, AND OVERALLS INDUSTRIES, BY SEX AND OCCUPATION.

Paper boxes.

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full-time worked.	Average earnings actually made—		
			In weekly pay period.	In bi-weekly pay period.	Per week day.	Per week.			In weekly pay period.	In bi-weekly pay period.	Per hour.	Per week.
MALES.											
Folding and set up boxes.											
Benders-up	5	17	46.6	.....	7.8	46.6	55.2	84	\$12.13	.....	\$2.58
Laborers.....	63	723	49.6	105.1	8.3	49.8	50.8	98	17.99	\$24.88	.359
Stayers.....	21	61	51.8	.....	8.7	51.8	53.9	96	17.95	.....	.347
Folding boxes.											
Cutters and creasers.....	30	247	48.9	.....	8.2	48.9	50.6	97	19.52	.....	.396
Die makers and pressmen.....	30	139	53.3	.....	8.9	53.3	50.6	105	28.42	.....	.523
Gluing-machine operators.....	11	30	50.8	.....	8.5	50.8	52.5	97	20.78	.....	.404
Scrappers.....	19	161	49.5	.....	8.2	49.5	49.5	100	20.92	.....	.407
Set up boxes.											
Closers and inspectors.....	6	10	44.5	.....	7.4	44.5	53.9	83	11.10	.....	.247
Cutters, scorers, and corner cutters.....	64	414	50.0	97.0	8.3	49.8	52.6	95	19.20	28.34	.376
Total.....	77	1,802	49.9	102.2	8.3	49.9	51.2	97	19.51	26.14	.374
FEMALES.											
Folding and set up boxes.											
Benders-up.....	24	94	44.6	.....	7.4	44.6	50.0	89	9.59	.....	.217
Laborers.....	26	221	42.0	93.1	7.0	42.0	48.8	83	9.28	21.91	.218
Stayers.....	66	323	45.7	90.2	7.6	45.6	50.2	91	11.97	21.93	.262
Table workers.....	71	1,258	45.5	94.6	7.5	45.0	50.1	90	11.54	21.75	.250
Folding boxes.											
Cutters and creasers.....	15	94	47.7	.....	7.9	47.7	48.9	96	14.30	.....	.288
Gluing-machine operators.....	22	217	45.5	.....	7.6	45.5	49.2	92	12.69	.....	.283
Scrappers.....	16	146	44.5	.....	7.4	44.5	50.4	85	12.16	.....	.269

<i>Set up boys.</i>									
Closers and inspectors.....	37	338	43.5	83.7	7.3	43.8	49.6	88	9.41
Coverers.....	47	272	47.3	86.7	7.9	47.4	50.5	94	12.86
Cutters, scorers, and corner cutters.....	19	64	44.3	.....	7.6	44.3	49.6	89	11.77
Glue-ers-off.....	40	247	45.1	.....	7.5	45.0	50.2	90	9.73
Strippers and top and bottom papers.....	53	753	46.5	94.4	7.7	46.2	50.2	89	11.13
Turners-in.....	38	336	44.6	84.0	7.4	44.4	49.7	89	8.50
Total.....	77	4,311	45.3	90.3	7.5	45.0	50.0	90	11.09
									20.04
									243
									11.05

Women's clothing.

MALES.									
<i>Children's, and house dresses and kimonos.</i>									
Cutters.....	33	85	49.2		8.1	49.2	49.1	100	\$28.34
Cutters, assistant.....	15	22	45.9		7.7	45.9	49.1	83	16.59
Operators.....	8	18	48.5		8.1	48.5	48.7	100	22.31
Pressers.....	10	19	48.4		8.1	48.4	48.9	99	26.52
									\$0.585
									384
									16.59
									22.31
									458
									26.52
									390
									29.09
									19.47
									404
									34.25
									703
									544
									26.72
									542
									26.86
									846
									42.03
									33.12
									826
									40.17
									31.46
									20.80
									37.08
									833
									42.98
									713
									32.83
									523
									319
									25.46
									14.10
									35.11
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TABLE 3.—AVERAGE HOURS AND EARNINGS IN THE PAPER-BOX, WOMEN'S CLOTHING, CONFECTIONERY, AND OVERALLS INDUSTRIES, BY SEX AND OCCUPATION—Continued.

Women's clothing—Concluded.

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full-time worked.	Average earnings actually made—			
			In weekly pay period.	In bi-weekly pay period.	Per week day.	Per week.			In weekly pay period.	In bi-weekly pay period.	Per hour.	Per week.
FEMALES.												
<i>Children's, and house dresses and kimones.</i>												
Examiners.....	26	126	46.5	.....	7.8	46.5	48.8	95	\$11.15	.....	\$0.238	\$11.15
Finishers.....	26	106	45.5	.....	7.8	45.5	49.0	93	9.77	.....	.213	9.77
Folders.....	7	17	46.2	.....	7.7	46.2	46.5	99	8.28	.....	.179	8.28
Operators.....	34	1,104	43.5	.....	7.7	43.5	49.1	89	13.29	.....	.309	13.29
Pressers.....	23	154	40.6	.....	6.8	40.6	48.9	83	10.78	.....	.266	10.78
<i>Cloaks.</i>												
Assorters.....	15	42	47.7	.....	7.9	47.7	48.3	99	13.89	.....	.290	13.89
Busshelers and examiners.....	25	76	47.1	.....	7.8	47.1	48.1	98	17.00	.....	.361	17.00
Button sewers and markers.....	35	250	45.3	.....	7.6	45.3	48.6	93	14.39	.....	.313	14.39
Cleaners.....	8	23	44.6	.....	7.4	44.6	48.0	93	10.24	.....	.230	10.24
Cutters, assistant.....	7	13	46.8	.....	7.8	46.8	48.0	98	16.20	.....	.345	16.20
Finishers.....	50	670	46.5	.....	7.7	46.5	48.4	96	19.31	.....	.420	19.31
Operators.....	28	594	44.8	.....	7.3	44.8	48.1	93	16.85	.....	.375	16.85
Pressers.....	2	19	42.4	.....	7.1	42.4	47.8	89	18.53	.....	.437	18.53
Tailors and sample makers.....	7	17	44.3	.....	7.4	44.3	48.2	92	22.10	.....	.504	22.10
<i>Dresses and waists.</i>												
Assorters and trimmers.....	17	48	44.5	.....	7.4	44.5	47.6	93	13.22	.....	.297	13.22
Cleaners.....	22	104	43.6	.....	7.3	43.6	46.6	94	11.33	.....	.261	11.33
Drapers.....	28	178	46.5	.....	7.8	46.5	46.5	100	21.02	.....	.454	21.02
Embroiderers.....	3	14	52.5	.....	8.1	48.9	52.5	93	11.24	.....	.230	11.24
Examiners.....	43	139	47.9	.....	7.7	46.1	47.9	96	14.46	.....	.314	14.46
Finishers.....	52	415	47.0	.....	7.2	43.2	47.0	92	14.90	.....	.344	14.90
Folders and boxers.....	7	15	47.6	.....	7.4	44.6	47.6	94	12.19	.....	.272	12.19
Operators.....	57	1,789	47.4	.....	7.2	43.0	47.4	91	18.84	.....	.445	18.84
Pressers.....	26	129	47.4	.....	7.2	43.6	47.4	92	16.06	.....	.370	16.06

White goods.

[illegible]

Confectionery.

[illegible]

TABLE 3.—AVERAGE HOURS AND EARNINGS IN THE PAPER-BOX, WOMEN'S CLOTHING, CONFECTIONERY, AND OVERALLS INDUSTRIES, BY SEX AND OCCUPATION—Concluded.

Overalls.

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full-time worked	Average earnings actually made—			
			In weekly pay period.	In bi-weekly pay period.	Per week day.	Per week.			In weekly pay period.	In bi-weekly pay period.	Per hour.	Per week.
MALES.												
Cutters.....	117	254	43.8	100.6	7.4	44.4	46.4	96	\$26.95	\$51.22	\$0.607	\$26.75
Operators.....	25	111	37.0	99.6	6.4	38.4	46.6	84	21.13	40.04	.551	21.06
Total.....	119	365	38.5	100.4	7.1	42.6	46.1	92	25.10	49.24	.590	25.02
FEMALES.												
Examiners.....	108	340	41.6	86.7	7.0	42.0	46.0	91	12.07	20.48	.285	11.85
Operators.....	129	6,160	39.4	84.2	6.7	40.2	45.9	88	12.36	20.82	.306	12.11
Trimmers.....	14	46	39.7	89.8	6.7	40.2	47.5	85	7.25	24.92	.205	7.93
Total.....	129	6,546	39.5	84.3	6.7	40.2	46.0	87	12.30	20.93	.304	12.06

Report on Reclassification of Government Employees.

THE Joint Congressional Commission on Reclassification of Salaries of Federal and District Employees in the District of Columbia, which on March 12, 1920, handed in its report to Congress, was created by a rider in the legislative, executive, and judicial appropriation act approved by the President March 1, 1919. The sections establishing the commission are as follows:

SECTION 9. That a joint commission is created to be known as the "Joint Commission on Reclassification of Salaries," which shall consist of three Senators, who are now Members of the Congress, to be appointed by the President of the Senate, and three Representatives, who are now Members of the Congress, to be appointed by the Speaker. Said commission shall submit its report and recommendations as early as possible, and, in any event, by the second Monday in January, 1920, and the members of such commission shall receive a compensation at the rate of \$625 per month, unless they are receiving other compensation from the Government. Vacancies occurring in the membership of the commission shall be filled in the same manner as the original appointments.

It shall be the duty of the commission to investigate the rates of compensation paid to civilian employees by the municipal government and the various executive departments and other governmental establishments in the District of Columbia, except the navy yard and the Postal Service, and report by bill or otherwise, as soon as practicable, what reclassification and readjustment of compensation should be made so as to provide uniform and equitable pay for the same character of employment throughout the District of Columbia in the services enumerated.

The commission is authorized to sit during the sessions or recess of Congress, to send for persons and papers, to administer oaths, to summon and compel the attendance of witnesses, and to employ such personal services and incur such expenses as may be necessary to carry out the purposes of this section.

The heads of the various governmental services and the Commissioners of the District of Columbia shall furnish office space and equipment, detail officers and employees, furnish data and information, and make investigations whenever requested by the commission in connection with the purposes of this section.

For payment of the expenses authorized to be incurred there is appropriated \$25,000, or so much thereof as may be necessary, to be available immediately and to be disbursed upon vouchers approved by the commission; which approval shall be conclusive upon the accounting officers of the Treasury Department.

The amount of money originally granted by Congress for the use of the commission was \$25,000, but it soon became evident that this sum was not sufficient to handle the work that must be done. As a result of hearings before the Senate and House appropriations committees in June, 1919, Congress granted the commission an additional appropriation of \$50,000. The time limit originally set for the submission of the commission's report to Congress was January 12, 1920, but the commission found it impossible to complete its task by the date named. An extension of time was granted by resolution approved January 10, 1920, extending the time of the commission for filing its report to March 12, 1920.

The commission as appointed consisted of Senator Andrieus A. Jones, New Mexico, chairman; Senator Charles B. Henderson, Nevada, vice chairman; Senator Selden C. Spencer, Missouri; and Representatives Courtney W. Hamlin, of Missouri, Henry Allen Cooper, of Wisconsin, and Edward Keating, of Colorado. Its creation was due to a realization of the need for a reclassification, and especially for a standardization of positions and salaries within the Government service. There had been no general adjustment of this kind for over 50 years, and conditions were unstandardized and chaotic to an extent which roused dissatisfaction and interfered with efficiency.

Procedure of the Commission.

THE commission's first task was to secure data as to the work actually performed by the employees with whom they were to deal. For this purpose questionnaires were distributed throughout the various governmental departments, bureaus, and divisions, asking for details of the work done by the recipient, his length of service, his qualifications, salary, experience, and so on. One of these was to be filled out by each employee. To guard against a possible exaggeration of the importance of his work by some too enthusiastic worker, the questionnaire, after being filled out, was submitted for revision to the worker's official superior, who wrote what comment he considered necessary upon the employee's statement, after which it was returned to the employee, who had an opportunity to protest against his chief's judgment if he thought the situation called for such action.

By the end of May, 1919, practically all of these questionnaires, to the number of 104,000, had been filled out and returned to the Reclassification Commission, and the work of classifying the positions was begun. A small force of industrial engineers was engaged to direct the task, but for the most part the work was done by Federal employees detailed from their regular service. At the outset it was decided to classify positions, not employees, on the ground that an employee might be transferred from one job to another, but that the work of a given position should be the same, no matter who held that position. The task was a long and difficult one. Prior to the commission's appointment, there was not even a list of what and how many were the Government positions held by civilian employees in the District of Columbia. The name which a position bore had little relation to the kind of work done, and apparently the kind of work done had little relation to the salary received. The whole list of over 100,000 positions was first roughly classified into 44 different services on the basis of the general nature of the work done, and then within each service a careful classification was made,

the different jobs being grouped, on the basis of qualifications and duties, to form an ascending series from the entrance position to the head of the service. The complexity of the task was much increased by the fact that many positions involved duties falling within two or more different services, and it was often a matter of extreme difficulty to decide in what class a given position properly belonged. In order to help in this matter, and also to aid in setting suitable salary scales after classification had been accomplished, the commission secured the formation of committees of employees within each service, to whom the specifications describing the various positions within their service were submitted for criticism, and who were asked to present salary scales and arguments supporting them. Hearings gave an opportunity for arguments in all services and briefs were submitted by the interested parties—that is, by the administrative officials and the employees, either separately or jointly.

Meanwhile, an advisory committee on wage policy had been formed, consisting of three representatives of the administrative side of the Government service, three representatives of the employees, and four economists. This committee concerned itself with general policies rather than with the salaries to be affixed to given positions. Other committees took up conditions of employment other than salary, such as the matter of annual leave, sick leave, working conditions, opportunities for advancement, and the like, reporting the results of their investigations back to the Reclassification Commission.

As the work of classification proceeded, it became evident that the decision as to a fair standard of compensation required an amount of information on subjects not covered by the questionnaire which could be supplied only by special inquiries, and the Division of Economic and Employment Research was formed. One important task undertaken by this body was an investigation to secure material for a comparison between Government salaries and those paid outside for similar work. Committees consisting of representatives of the Government employees, of the administrative side of the service, and of the public were asked to recommend sources for the collection of such data, and by their help a list was prepared of establishments within the "Washington Zone," bounded by Boston on the north, Pittsburgh on the west, and Richmond on the south, which would fairly represent conditions among the better class of employers outside of the Government service. Agents to conduct the investigation were detailed from different Government agencies. As soon as the reclassification staff had prepared specifications setting forth the duties of given positions and the qualifications required to fill them, the agents were given these specifications and sent out to secure

from the selected employers data as to the wages, hours, necessary qualifications, vacation and sick leave privileges, etc., of their employees in similar positions. Some 3,200 schedules were gathered in this way, covering over 35,000 different employees. This material was tabulated so as to show the minimum, the maximum, and the weighted average salary paid for these outside positions, and was presented for the consideration of the commission, together with a similar tabulation of the salaries paid within the Government for corresponding positions.

The report submitted by the reclassification Commission will be discussed in later issues of the MONTHLY LABOR REVIEW. Its most important points are the definition and classification of the Government positions which it presents, its provision for advancement on the basis of proved efficiency after the service has been entered, its plan for promotion from one class to another, its definite relation of a specified salary to specified duties, its recommendation for a continuing body to administer its provisions, and its suggestion for the creation of an advisory council to act with the administrative body in interpreting and applying the different provisions. Its salary recommendations are conservative; on the whole, they represent an increase, though this does not hold true without exception. A standard annual leave of 30 days is recommended, this to be a matter of right, not favor; and the employee is entitled to appeal if it is denied him. On the other hand, the annual amount of sick leave is cut to 10 days, but this may be cumulative to the amount of 60 days.

Average Wages of Farm Labor in the United States in 1918 and 1919.¹

AT NO other time since 1866, when the first investigation of this subject was made by the Bureau of Crop Estimates, United States Department of Agriculture, were the wages rates of farm labor so high in this country as they were in 1919. Averages for the United States are in mind, and not local rates. For labor hired by the month with board, the average rate was \$39.82, and among the geographical divisions the average was as low as \$30.54 in the South Atlantic and as high as \$62.96 in the Western, including the Mountain and Pacific States. Without board, the average for the United States was \$56.29, and the lowest was \$44.03 in the South Atlantic division and the highest, \$87.12, in the Western division. Extras, such as firewood, milk, etc., are not included.

¹ From Weekly News Letter, Feb. 4, 1920. Department of Agriculture, Washington.

Harvest wages per day with board reached the top figure of \$4.48 in the North Central States west of the Mississippi River and the lowest figure of \$2.28 in the South Atlantic States, and the United States average was \$3.15. Without board, the United States average of \$3.83 was most exceeded by \$5.33 in the former States, while the latter States had the lowest average, \$2.82.

Statements in similar form for day wages for work outside of harvest with board make the United States average \$2.45, that of the North Central States west of the Mississippi River \$3.22 and of the South Atlantic States \$1.85; the rates without board, in the same order, were \$3.12, \$4.03, and \$2.39.

The following table gives a comparison of the wages received by farm labor in 1918 and 1919, with per cent of increase in 1919 over 1918:²

WAGES OF FARM LABOR IN 1918 AND 1919, SHOWING PER CENT OF INCREASE IN 1919.

Year.	Monthly wages.		Daily wages, at harvest.		Daily wages, not at harvest.	
	With board.	Without board.	With board.	Without board.	With board.	Without board.
1918.....	\$34.92	\$47.07	\$2.65	\$3.20	\$2.07	\$2.63
1919.....	39.82	56.29	3.15	3.83	2.45	3.12
Per cent of increase in 1919.....	14.02	19.59	18.87	19.69	18.36	18.63

Earnings in Manufacturing Industries in New York State, December, 1914 and 1916 to 1919.

THE average weekly earnings in manufacturing industries in New York State in December of each year 1914 to 1919, except 1915, are tabulated in the December issue of the Labor Market Bulletin, published by the New York State Industrial Commission. The following table reproduces these figures by industries, so far as they apply to the State as a whole, with average figures for industries in New York City alone and for industries in the State outside of New York City. In order to determine at a glance the extent of the increase of earnings in 1919 over earnings in 1914, a column showing these increases in terms of per cent has been added to the table; this column does not appear in the original table. A comparison of earnings of New York State factory workers and retail prices of food appeared in the February issue of the MONTHLY LABOR REVIEW (p. 128).

² Data taken from Crop Reporter for December, 1919. Department of Agriculture, Washington.

AVERAGE WEEKLY EARNINGS IN DECEMBER, 1914 AND 1916 TO 1919, IN FACTORIES OF NEW YORK STATE.¹

Industry.	Average weekly earnings in December—					Per cent of increase, 1919 over 1914.
	1914	1916	1917	1918	1919	
Stone, clay, and glass products.....	\$13.94	\$16.16	\$18.32	\$25.30	\$26.33	88.83
Miscellaneous stone and mineral products.....	18.47	18.42	19.64	26.35	28.28	53.11
Lime, cement, and plaster.....	13.38	16.52	18.16	27.32	27.21	103.36
Brick, tile, and pottery.....	11.53	13.73	16.19	21.81	23.31	102.17
Glass.....	14.23	15.89	18.53	25.27	26.16	83.84
Metals, machinery, and conveyances.....	14.24	18.11	20.84	27.39	29.08	104.21
Gold, silver, and precious stones.....	14.24	18.10	18.99	26.52	32.95	131.39
Brass, copper, aluminum, etc.....	12.73	17.32	18.62	25.45	26.68	109.58
Pig iron and rolling-mill products.....	16.63	21.76	27.70	37.97	36.36	118.64
Structural and architectural ironwork.....	15.31	17.98	20.50	30.21	32.75	113.91
Sheet-metal work and hardware.....	12.20	14.50	17.24	22.44	24.80	103.28
Firearms, tools, and cutlery.....	13.07	18.78	20.90	24.01	25.63	96.10
Cooking, heating, and ventilating apparatus.....	13.87	17.94	21.12	27.47	31.65	128.19
Machinery (including electrical apparatus).....	13.96	17.73	19.85	25.22	28.26	102.44
Automobiles, carriages, and airplanes.....	18.07	19.13	21.69	26.55	29.89	65.41
Cars, locomotives, and railway repair shops.....	14.34	19.28	23.10	34.07	31.17	117.36
Boat and ship building.....	16.16	21.11	22.98	32.01	37.57	132.49
Instruments and appliances.....	13.40	16.17	17.58	21.25	24.90	85.82
Wood manufactures.....	12.50	14.93	16.70	20.97	24.07	92.56
Sawmill and planing-mill products.....	12.06	14.35	16.19	21.11	24.92	106.63
Furniture and cabinet work.....	12.73	15.22	17.22	20.91	24.76	94.50
Pianos, organs, and other musical instruments.....	14.29	17.33	18.30	22.53	22.02	54.09
Miscellaneous wood and allied products.....	10.81	12.77	14.92	19.52	23.75	119.70
Furs, leather, and rubber goods.....	11.83	14.86	16.75	22.19	25.95	118.43
Leather.....	11.04	15.48	18.21	22.57	25.42	130.25
Furs and fur goods.....	14.13	16.67	22.03	29.80	34.23	142.25
Boots and shoes.....	12.52	15.50	17.20	23.46	26.69	113.18
Miscellaneous leather and canvas goods.....	10.99	13.52	14.57	18.55	24.87	126.30
Rubber and gutta percha goods.....	10.93	14.09	15.97	19.91	24.52	124.34
Pearl, horn, bone, celluloid, hair, etc.....	9.62	12.23	13.79	17.86	20.36	111.64
Chemicals, oils, paints, etc.....	13.64	16.02	18.00	21.81	25.47	86.73
Drugs and chemicals.....	14.57	15.13	16.68	19.97	25.06	72.00
Paints, dyes, and colors.....	14.43	15.37	16.43	21.66	24.36	68.81
Animal and mineral oil products.....	13.35	16.39	19.03	22.91	25.85	93.63
Miscellaneous chemical products.....	13.17	16.41	17.96	21.89	25.55	94.00
Paper.....	13.32	16.19	18.96	25.52	27.35	105.33
Printing and paper goods.....	15.16	16.42	17.85	22.69	28.41	87.40
Paper boxes and tubes.....	10.59	12.31	13.03	17.62	21.42	102.27
Miscellaneous paper goods.....	11.75	13.24	14.69	18.38	23.02	95.91
Printing and book making.....	17.03	17.97	19.42	24.66	30.80	80.88
Textiles.....	9.47	11.91	13.61	17.21	21.06	122.39
Silk and silk goods.....	9.20	10.73	12.19	15.50	18.60	102.17
Wool manufactures.....	9.90	12.47	14.91	17.62	23.21	134.44
Cotton goods.....	9.61	13.15	14.88	19.44	23.26	142.04
Cotton and woolen hosiery and knit goods.....	8.93	11.16	12.73	16.27	19.83	110.86
Other textiles and allied products.....	10.20	12.76	14.23	18.93	22.74	122.94
Clothing, millinery, laundering, etc.....	10.00	12.15	13.72	16.45	24.23	142.30
Men's clothing.....	11.02	13.15	15.78	18.77	30.17	173.77
Men's shirts and furnishings.....	8.51	11.09	11.58	13.13	18.34	115.51
Women's clothing.....	12.24	14.21	15.75	19.55	27.27	122.79
Women's underwear and furnishings.....	8.18	10.28	11.40	14.43	18.74	129.10
Women's headwear.....	10.92	13.66	16.88	19.12	24.80	127.93
Miscellaneous sewing.....	8.36	9.12	9.53	12.89	17.67	111.36
Laundering, cleaning, dyeing, etc.....	8.86	10.40	11.51	14.96	18.10	104.29
Food, beverages, and tobacco.....	11.72	13.70	15.37	20.25	23.59	101.28
Flour, feed, and other cereal products.....	15.10	16.38	19.44	24.71	27.39	81.39
Fruit and vegetable canning and preserving.....	9.62	11.32	12.43	17.54	20.12	109.15
Groceries not elsewhere classified.....	13.20	14.47	17.53	21.92	26.24	98.79
Slaughtering, meat packing, and dairy products.....	14.88	17.23	19.42	26.41	28.33	90.29
Bread and other bakery products.....	11.19	13.47	15.31	21.48	23.61	110.99
Confectionery and ice cream.....	9.64	10.82	12.00	14.94	18.34	90.25
Beverages.....	13.68	19.77	21.32	27.19	27.83	49.78
Cigars and other tobacco products.....	8.96	11.53	12.58	16.30	21.15	136.05
Water, light, and power.....	15.48	17.45	20.62	26.89	31.00	100.26
Average, all factories in the State.....	12.56	15.51	17.71	23.18	26.32	109.55
Factories in New York City.....	12.81	14.93	16.61	22.11	27.58	115.30
Factories outside New York City.....	12.40	15.83	18.32	23.77	25.63	106.69

¹ Includes all employees in both office and shop. It is commonly the case that office salaries are higher than the average earnings of shop employees. However, the office employees form such a small percentage of the total number of workers that their effect, in the computation of the average earnings, is negligible.

Changes in Wages and Hours of Labor in Great Britain.

THE increasing extent to which wages have been advanced and the reduction that has taken place in the number of hours of work are indicated in returns issued on December 19 by the British Ministry of Labor, according to a report from the American consul general at London, published in Commerce Reports (Washington) for January 9, 1920.

Additions granted during the month of November added substantially £480,000 (\$2,335,920, par) to the weekly wages of approximately 1,900,000 workpeople, and during the first 11 months of 1919 5,343,000 people secured increases aggregating £1,908,900 (\$9,289,662, par) weekly, or nearly £100,000,000 (\$486,650,000, par) per annum. The largest number of workpeople affected was in the engineering and shipbuilding trades, namely, 1,329,000, or 24.9 per cent; and the largest wage advance was given to coal miners, namely, £587,000 (\$2,856,636, par), or 30.8 per cent of the total.

The report states that announcement has been made of awards of the court of arbitration concerning the applications of electrical workers and of farriers employed by the London County Council, the corporations of Croydon and Wimbledon and other urban districts, and the various electrical supply companies and tramway undertakings in the metropolitan area who demanded an increase of 15s. (\$3.65, par) per week. Under these awards electrical workers 18 years of age and over and electrical operators working on railroads within the London district have been given an advance of 5s. (\$1.22, par) per week. The farriers, who claimed 3s. (73 cents, par) per day more have been given 1s. 6d. (36.5 cents, par), while firemen's pay has been advanced to 13s. 9d. (\$3.35, par), and doormen's to 13s. 2d. (\$3.20, par) per day.

Beginning with April 1, 1920, according to a ruling by the London County Council, senior superintendents of the fire brigade will receive £575 (\$2,797.24, par) per annum, rising to £625 (\$3,041.56, par); superintendents, £475 (\$2,311.59, par); subofficers, £5 10s. (\$26.77, par) per week. Firemen will commence with £3 10s. (\$17.03, par), rising to £4 8s. (\$21.41, par), and, subject to passing an examination, to £4 13s. (\$22.63, par) per week.

The consul general further reports that in November, 1919, 30,000 workpeople had their hours of labor reduced on an average of three hours each, or 90,000 hours for the month, and that the changes effected in this respect during the first 11 months of 1919 aggregated 36,211,000 fewer working hours, the number of workpeople affected totaling 5,479,000.

MINIMUM WAGE.

Minimum Wages in the District of Columbia.

THE Minimum Wage Board of the District of Columbia has presented its second annual report,¹ covering its first real activities.

The law went into effect in September, 1918, the wage board being appointed in the following month. The first order fixing wages bears the date of June 13, 1919, so that the subject matter presented is really that of a new organization.

A striking fact in connection with the enactment of the minimum wage law for the District was the friendly attitude of the Merchants' and Manufacturers' Association. No opposition to the law was ever offered, and the board states that whatever success has been attained in the administration of the law "is due in no small measure to the active cooperation of the Merchants' and Manufacturers' Association." Organized labor likewise favored the enactment of the law and has been active in its support. The position of the District board is therefore unique in a number of respects. Both parties affected by the law have favored it from the beginning, and the District officials and the public have shown cordial sympathy with it at all times. Employers have served freely on the conferences, appointing therefor their strongest representatives; employees have been willing and eager to serve, hotly contested elections being held to determine nominees for positions on the conferences; and only two persons considered as representatives of the public have refused to serve, and then only by reason of pressure of other work. The area served by the District board is restricted, making for homogeneity of conditions and ease of administration. It is estimated that about 15,700 women come under the law.

Surveys have been made in three groups of industries, the first covering printing, publishing, and allied industries, employing about 900 women; the second covering mercantile employment, with about 7,000 women; and the third including the hotels, restaurants, and allied industries, with about 2,500 females employed. Wage surveys were made in each group, covering in all 7,563 women. The following table shows the conditions existing at the time of the investigations:

¹ Second annual report of the Minimum Wage Board of the District of Columbia for the year ending Dec. 31, 1919. Washington, 1920, 60 pp. The full text of the law is given in the MONTHLY LABOR REVIEW for October, 1918, pp. 171-181.

NUMBER AND PER CENT OF WOMAN WORKERS RECEIVING EACH CLASSIFIED WEEKLY RATE, BY INDUSTRY.

Number.

Industry.	Woman workers whose rate of wages per week were—									Total.
	Under \$9.	\$9 and under \$10.	\$10 and under \$11.	\$11 and under \$12.	\$12 and under \$13.	\$13 and under \$14.	\$14 and under \$15.	\$15 and under \$16.	\$16 and over.	
Printing, publishing, and allied industries.....	25	24	82	38	107	68	29	91	281	745
Mercantile industry.....	452	226	620	112	968	125	280	640	1,186	4,609
Hotel, restaurant, and allied industries.....	113	177	78	39	262	88	205	338	909	2,209

Per cent.

Printing, publishing, and allied industries.....	3.4	3.2	11.0	5.1	14.4	9.1	3.9	12.2	37.7	100.0
Mercantile industry.....	9.8	4.9	13.5	2.4	21.0	2.7	6.1	13.9	25.7	100.0
Hotel, restaurant, and allied industries.....	5.1	8.0	3.5	1.8	11.9	4.0	9.3	15.3	41.1	100.0

In arriving at the wages of hotel, etc., employees, allowances were made where board and lodging were provided, and it is the opinion of the board that the actual wage situation in these industries is not accurately disclosed by the table, but is as bad as in the other two groups, if not worse. The allowance of \$6 for board and \$3 for room is believed to be too high for the type of accommodations furnished. The fact that in a recent investigation of the cost of living of wage-earning women in the District of Columbia by the United States Bureau of Labor Statistics it had been found that \$16 was approximately the necessary standard for a living wage, led to the adoption by the board of this amount as a tentative minimum cost of living figure.

The lowest percentage of women receiving \$16 or more per week was found in the 5 and 10 cent stores, where but 5.9 per cent of the women were thus paid. Marked differences in wage rates between stores of the same type were found, and also a wide range within an individual establishment. In fact standardization seemed to be entirely lacking and even avoided. "It was a general practice in stores to instruct the new employee that she must on no account tell her fellow workers what wage she was receiving, and these secrets were apparently well kept." This made it possible to pay different amounts for the same kind of work, and also for the aggressive individual to secure an advance, while "the woman who did not ask for a raise seldom received one." There was a greater uniformity in the hotel and restaurant industries.

Conferences representing employers, employees, and the public in equal numbers (three of each) were held for each industry considered. Representatives of employers and employees were chosen by the persons interested, six names to be submitted, from which the

board selected three, designating also the chairman of the conference. The conference on printing, publishing, and allied industries held its initial meeting on March 4, 1919, and met weekly until April 8, 1919, at which time it adopted a report recommending the minimum rate of \$15.50 per week, with provisions for learners. A public hearing was held on June 14, 1919, but no protest being submitted, the rate was promulgated to take effect on August 13, 1919. The rate fixed is applicable to experienced females, by which term is meant one who has been employed in the industry one year or more. Learners are to be paid not less than \$8 per week for the first three months, \$9 per week for the second three months, not less than \$11 per week for the third three months, and not less than \$12 per week for the fourth three months, after which the established minimum is payable.

The mercantile board held 10 meetings between May 21 and July 12, and recommended a wage for experienced women of \$16.50 per week. The difference between the two rates was said to be due to the fact that women in the printing trades could wear aprons and less expensive clothing at work, while the greater majority of the mercantile employees must present a proper appearance to the public. Learners 18 years of age or more must receive not less than \$12.50 per week for the first three months of employment, and not less than \$14.50 for the following four months, after which time they are to be considered experienced workers. A rate for learners under 18 was also fixed, but was protested by the Merchants' and Manufacturers' Association as being too nearly the same as for adults. The question of providing a lower rate was earnestly discussed, employers arguing that the high wage offered would act as an incentive to minors to leave school, but that they would be thrown out of employment when the expiration of the learning period would require the payment of the full minimum rate. The labor representative on the board, on the other hand, argued that a high wage would discourage employers, preventing the hiring of minors, so that they would remain in school until a more mature age when the minimum would be actually earned. A compromise measure was adopted, however, reducing the rate for minors under 18 and providing for an entrance rate of not less than \$10 for the first four months of employment, of not less than \$11.50 for the next four months and of not less than \$14.50 for the following 6 months, after which not less than \$16 per week should be paid until the age of 18 is reached. No time served prior to the sixteenth birthday is to be considered as experience in determining the minimum wage.

As already indicated, good administration has been facilitated by the cooperation of all parties affected. But few violations of the law have been found, and no proceedings have been instituted therefor. Collections have been made through the board where less than the

legal rates were paid, amounting to \$186.96, ranging in amounts from \$137 to \$8. Learners' certificates are used, and these are found to be of great value as protecting both the employers and the employees. Some experienced workers have been found who attempted to begin service in other places as learners on account of difficulty in securing employment at the minimum rate. The employer is liable to be penalized if he gives employment to such persons, therefore the learner's certificate, on which the applicant must enter all prior service, is his best safeguard.

Licenses for substandard workers are provided for, of which 51 have been issued, nearly all (48) being in the mercantile industry. Of the total, 45 were for women whose capacity had been impaired by age, 3 were to subnormal girls, and 3 were for short periods to women whose present physical condition would not permit regular work.

The effects of the law have been for too short a time under observation to make final conclusions possible. However, there has been a definite increase in the amount of wages paid, without any considerable replacement of women by men. There has also been a tendency to raise wages in other industries for which no orders have been issued, since the mercantile rate of \$16.50 affects such a large proportion of the employed women of the District. The contention that the minimum tends to become the maximum is disproved by the experience thus far developed. Some degree of hardship has resulted in the case of women incapable of measuring up to the higher standards necessitated by the higher costs of service. This situation affects the District of Columbia the more seriously since there are so few occupations available to women seeking employment. Factories are few, and the positions generally available require at least a woman of ordinary ability to compete successfully. The special license is a partial solution, but leaves the substandard worker without a living wage. However, it is felt that the substandard worker must be cared for in some other way, and that the minimum wage law fills its purpose well in securing an adequate basis of support for the vast majority of workers for whom these provisions are made.

Minimum Wages for Women in Certain Industries in British Columbia.

ACCORDING to the Canada Labor Gazette for February (pp. 169, 170), the British Columbia Minimum Wage Board has recently issued orders fixing minimum wages for women in the fishing industry and in the fruit and vegetable industry. These orders were effective February 28, 1920, and follows.

Fishing Industry.

The minimum wage for every experienced female in this industry who is of the age of 18 years or over (except women to whom a special license may be issued under section 10 of the Minimum Wage Act) shall be at the rate of \$15.50 per week. The minimum wage for every inexperienced female who is of the age of 18 years or over (except women to whom a special license may be issued) shall be at the following rate: Not less than \$12.75 for the first four months, \$13.75 for the second four months, and \$14.75 for the third four months.

The fishing industry is defined as including the work of females engaged in the washing, preparing, preserving, drying, curing, smoking, packing, or otherwise adapting for sale or use, or for shipment, any kind of fish except in the case of canned fish. An "experienced female employee" is one who has worked in the fishing industry for a period of at least 12 months, while an "inexperienced employee" means one who has worked in the fishing industry for a period of less than 12 months.

Fruit and Vegetable Industry.

The minimum wage for every experienced female employee engaged in the fruit and vegetable industry, who is of the age of 18 years or over (except women to whom a special license may be issued), and who is employed on a time-rate basis, shall be the sum of \$14 for a week of 48 hours. The minimum wage for every inexperienced female in this industry, who is of the age of 18 years or over, and is employed on a time-rate basis, shall be the sum of \$10 a week for the first month, \$11 a week for the second month, and \$12 a week for the third month. Where payment of wages is made on a piece-rate basis instead of a time-rate basis in the preparation of any product, the minimum piece rates shall be such as will produce the wages mentioned above. In an emergency period the hours of labor for an employee may be extended to 10 hours a day or up to 60 hours in any one week. The minimum wage for an employee during the time of labor in any day in excess of eight hours, and up to and including 10 hours a day, shall be such as will produce a wage of 30 cents an hour. The minimum wage, whether on time-rate basis or a piece-rate basis, for an experienced female employee who is of the age of 18 years or over, during the time of labor in any day in excess of 10 hours, shall be such as will produce a wage of 45 cents an hour.

The Labor Gazette states that in this order the expression "fruit and vegetable industry" includes the work of females engaged in canning, preserving, drying, packing, or otherwise adapting for sale or use, any kind of fruit or vegetable. "Experienced female employee" is defined as a female who has worked in the industry for at least three months, while an "inexperienced female employee" is one who has had less than three months' experience. "Emergency period" means a period of 90 days in any 12 months during which the hours of labor for female employees may be extended.

COOPERATION.

Consumers' Cooperative Wholesale Societies in the United States.

By FLORENCE E. PARKER.

ONE writer on the cooperative movement states that "the test of a really established movement, undoubtedly, is the existence of a federation."¹ If this is true, the cooperative movement in the United States is established, or is rapidly becoming so.

During the past few years the number of cooperative enterprises has increased rapidly. No statistics relative to the extent of the movement are available. The Cooperative League of America estimates, however, that of consumers' societies alone there are probably 3,000 in the United States, with a membership of over 500,000.² The combined buying power of these societies is placed at about \$200,000,000 yearly.³

The isolated independent cooperative store is, nevertheless, at a great disadvantage in its purchasing. It can not, by itself, compete very successfully with the large department stores or chain-store systems, because it can not hope to obtain, on its small orders, the low prices obtained by the latter on their enormous ones. Leaders in the cooperative movement have long realized the advantages of a wholesale society, and as a result of their efforts there are now in existence a number of district wholesale societies formed during the past decade. Of recent years, however, a movement has been under way looking toward federation along national lines. This plan took shape during the First American Cooperative Convention held in September, 1918, at Springfield, Ill., in the organization of the National Cooperative Association. This step was taken with the idea that the national body would take over the operation of the district wholesales as soon as this could be done without disturbing their functioning.

Organization was perfected, offices and a warehouse were secured in Chicago, and the National Cooperative Association began operations about the 1st of November, 1919. Branch wholesale warehouses have been established at Seattle, Wash., and Hoboken, N. J. It is planned

¹ Albert Sonnichsen: *Consumers' Cooperation*. New York, Macmillan Co., 1919, p. 62.

² The story of cooperation, published by Cooperative League of America, 2 West Thirteenth Street, New York, 1919. p. 15.

³ Estimated by National Cooperative Association, Chicago.

to establish additional wholesales at Los Angeles, Kansas City, Omaha, Denver, and other points.

At the first annual meeting of the association held March 15, 1920, the word "wholesale" was added to the name of the association.

Following is a directory of the National Cooperative Wholesale Association and the district wholesales:

National Cooperative Wholesale Association, Main Office, 342 River Street, Chicago, Ill.

National Cooperative Wholesale Association, Northwestern Branch, 1206-1208 Western Avenue, Seattle, Wash.

National Cooperative Wholesale Association, New York Branch, 1113-1115 Clinton Street, Hoboken, N. J.

District cooperative wholesales.

Cooperative Wholesale Co., 236 Commercial Street, San Francisco, Calif.

Cooperative Wholesale Society of America, Pioneer Bldg., St. Paul, Minn.

Cooperative Central Exchange, Superior, Wis.

Central States Cooperative Society, 612 Missouri Avenue, East St. Louis, Ill.

Tri-State Cooperative Association, 39 Terminal Way, Pittsburgh, Pa.

Organization and Purposes of the Wholesale Society.

THE wholesale association performs for its members, the retail societies, the same function that the latter perform for their members; the local society saves the profit of the retailer, the federated society saves the profit of the commission merchant and jobber. The following description of the benefits derived from the English Cooperative Wholesale Society by its members would apply equally to a similar society established in this country:

It was not of marked benefit to the larger societies, which were already able to buy in big quantities and deal independently with manufacturers and agricultural producers, but the majority of them joined through the enthusiasm of their leading members. It was to the smaller units of the movement that the wholesale came, often as a saving institution. First of all, it solved the discouraging problem of buying on the wholesale market, a difficulty especially terrifying to amateurs. It saved also the expense of buying; not only the higher salaries which must be paid men with such ability, but the time which they must devote to this function. It was far better able to insure quality and purity, since it could afford to employ men who were experts in judging. Its growing purchasing power could enable it to obtain better bargains; this, of course, was one of the chief arguments in its favor. It saved the stores the profits of the middlemen. Finally, it encouraged the formation of new societies, thereby providing a stimulus for the further expansion of the movement, for it eliminated many of the important causes of failure.⁴

The plan of organization of the cooperative wholesale societies in the United States follows that of the cooperative retail associations⁵ and is substantially as follows:

1. Membership is usually restricted to cooperative organizations conducted on the Rochdale plan and to cooperative buying clubs, though individuals are sometimes admitted. Organizations operating for profit are excluded.

⁴ Albert Sonnichsen: *Consumers' Cooperation*. New York, Macmillan Co., 1919. pp. 33, 34.

⁵ For a detailed discussion of the retail cooperative stores and the plan under which they operate, see *MONTHLY LABOR REVIEW*, March, 1920, pp. 138 to 145.

2. Capital investment required of each local association ranges from \$100 to \$1,000. In some instances the sum varies with the size of the local societies.

3. Retail organizations are entitled to be represented at the meetings of the wholesale by one or more delegates chosen from their membership, the number being either absolute or based on the size of the society.⁶ The affairs of the wholesale society are managed by a board of seven or nine directors elected either from the delegates or from the members of the constituent stores.

4. Business is conducted on a cash basis, at prevailing wholesale prices, and savings are returned to member associations on the basis of patronage.

The cooperative wholesale society as found in the United States differs in one important respect from the English cooperative wholesale society. The English wholesale is purely a federation of independent local associations. The American type of wholesale society is not so much a federated as a centralized society, having both wholesale and retail activities, with final control of the retail branches remaining in the wholesale society. In this type of society, the retail stores have less independence than is the case in England. The societies studied diverge from the federated type in varying degree, however, as will be seen from the descriptions given later in this article.

The question of the degree of control which should be exercised by the wholesale society over its members is a matter of some controversy among leaders in the movement in the United States. The Cooperative League of America is the chief critic of this centralization of power.

Educational Work.

One of the main services a wholesale may perform is along the lines of educational work. To this end the societies studied annually appropriate from the savings an amount ranging up to 10 per cent of the savings after deduction of interest to be paid on capital stock. The societies use this fund to furnish information, literature, lectures, stereopticon slides or even moving pictures on the cooperative movement. Most of them publish weekly or monthly magazines for the benefit of their members.

Bookkeeping and auditing service.—The wholesale society may be of especial service in introducing a satisfactory and uniform system of bookkeeping and auditing. Lack of such a system has been a potent cause of failure of cooperative stores. It is interesting, therefore, to note what the wholesale societies studied are doing in this respect. In two of the societies—the Pacific Cooperative League and the Tri-State Cooperative Association—the bookkeeping of the local associations is done at the central office of the wholesale, as is also the auditing of the association's accounts. The Cooperative Wholesale Society of America requires that its member stores install a certain system of accounting. They may have their bookkeeping and

⁶ The Scottish Wholesale Society bases representation on members' purchases through the society. So far as is known, no wholesale society in the United States follows this practice.

auditing done by the society, but this is not required. The Cooperative Central Exchange furnishes assistance in installing, but does not require, a uniform system of accounting. It also furnishes auditing service. The Central States Cooperative Society does not require any particular system of bookkeeping nor does it supply this or auditing service to its members. It has, however, issued a form which it recommends and which, it is stated, is "quite generally used" by the affiliated associations.

Courses in cooperation.—The Tri-State Cooperative Society, as a part of its educational work, is opening a school of cooperation whose first session will be held from January 30 to June 11, 1920. The purpose is "to begin general educational work in the interest of the cooperative movement in all its aspects and to afford specific training to prospective workers in the various departments of cooperative enterprise." Two courses are offered, the first, "Store management"—including such topics as cooperative advertising, organization of working force, systematization of business and delivery service, elements of accounting, sources of waste, standards of efficiency, etc.—open only to persons expecting to seek positions in the cooperative movement or already holding such positions, and the second, "Scientific principles of cooperation," open to "all persons of serious interests."

A short course in cooperation, attended by about 40 students, was given by the Cooperative Central Exchange in 1919 and plans are being made for giving a similar course this year.

National Cooperative Wholesale Association and Its Branches.

AS HAS been said, the National Cooperative Wholesale Association was organized at the first National Cooperative Congress held at Springfield, Ill., in September, 1918, but did not begin operations until about the 1st of November, 1919. The association is incorporated, under the laws of Wisconsin, for \$1,000,000, divided into 10,000 shares of \$100 each. Only cooperative associations organized on the Rochdale plan are eligible to membership. Each member society must subscribe for three shares for each one hundred (or major fraction thereof) of its members; for every 500 members it is entitled to a delegate to represent it at the meetings of the association. Under an amendment just adopted (Mar. 15, 1920), hereafter an association applying for membership will be required to subscribe to the wholesale a sum equal to 25 per cent of its capital stock.

The association has its general office and a five-story wholesale warehouse in Chicago, and branches in Seattle and Hoboken.

The president's annual report states that on March 15, 1920, 167 cooperative stores were affiliated with the national body.⁷ The mem-

⁷ National Cooperative News, Chicago, Mar. 27, 1920.

bership of the National Cooperative Association will of course be greatly increased with the taking over of each of the district wholesales, with its affiliated societies.

The affairs of the association are managed by a board of seven⁸ directors, one being elected from each of the seven principal cooperative districts. Three of these directors serve respectively as president, vice president, and secretary-treasurer.

The association has established an organization department that is assisting in organizing, on the chain-store plan, stores in the district of each of the branch wholesale societies.

The association has been established too short a time for one to judge of its success. The report of the first two months' operations, however, showed a volume of business amounting to over \$150,000, and a net gain of over \$5,000, which will be returned to the member societies on the basis of patronage.

The president of the association states that the association plans to cooperate in its purchasing, with the various producers' cooperative organizations in the effort to "bridge the gap between producer and consumer without profit or profiteering." Cooperative stores tributary to Chicago, New York, and Seattle are being supplied from the warehouses of the cooperative wholesale associations at each of these points. The wholesale society is handling the product of the cooperative milk condensary at Tolt, Wash. It is stated that arrangements have been made with the new cooperative salmon cannery at Port Angeles, Wash., by which the wholesale society will act as agent for the sale of the cannery's entire output. The National Association is also cooperating with the Railroad Brotherhoods in the sale of the products of their newly acquired clothing factories.⁹ The product of a cooperative cigar factory in Chicago is handled by the wholesale society.

Carrying out the policy of cooperators to deal with cooperators wherever possible, the National Cooperative Association has placed orders with the English Cooperative Wholesale Society at Manchester, for a supply of woolen cloth.⁹

The National Association is a member of the International Cooperative Alliance.

District Cooperative Wholesale Societies.

Pacific Cooperative League.

THE center of the cooperative movement in California is the Pacific Cooperative League, with headquarters and a wholesale company, the Cooperative Wholesale Co., in San Francisco. The league was formed in 1913 in the attempt to save the situation created by

⁸ This number was increased to nine on Mar. 15, 1920.

⁹ National Cooperative News, Chicago, Feb. 14, 1920.

the failure of an earlier movement begun about 18 years ago. The failure of these early stores is laid to "lack of mutual support; lack of experience and education in cooperation; lack of friendly wholesale facilities."

Membership in the Pacific Cooperative League is open to cooperative stores, organized clubs, firms, and corporations on payment of \$5 entrance fee, \$100 share capital, and \$900 loan capital. In order that individuals may enjoy the trading, social, and educational features of the league without assuming the liabilities of the regular member, provision is made for "associate" memberships. Associate members pay \$5, which entitles them to the advantages the league offers, as long as they take "continuous advantage" of them.

Though no attempt is made by the league to induce established stores to affiliate, the feeling being that it is better for the stores themselves to take the initiative, many stores, realizing the advantages of federation, have joined the league. A large number of these stores, on affiliation, are not solvent and have to be carried "on probation" until they become so. In these cases the league takes over their bookkeeping and does their buying, and is generally able to reestablish them financially.

Organization work is an important part of the league's activities. Stores are organized, however, only when the cooperative spirit is sufficiently strong and widespread to give a reasonable assurance of success. According to the secretary of the league, in the "average community," 200 members, each subscribing from \$35 to \$50 for capital and organization expense, are required.¹⁰

Each store has local autonomy. It makes its own by-laws, and elects its own directors and a representative to serve on the Central Board of Delegates of the league.¹¹ From these delegates are elected the seven directors who form the Central Board of Directors which manages the affairs of the league. The manager of the store, however, is selected by the league.

Each store declares its own dividends on purchases, after fulfilling certain requirements of the league as to interest on shares, and reserve and educational funds. It is hoped that as the business methods become more established dividends may be made uniform for all stores under the league, as has been done in the case of the cooperative stores within the city of Seattle and by the Tri-State Association in its stores.

Individuals, members of an association, are permitted transfer privileges to another association, and any member removing from the vicinity of a store entirely becomes a member at large for life,

¹⁰ Pacific Cooperator, San Francisco, October, 1919, p. 9.

¹¹ When the membership exceeds 250 it may subscribe for another membership share and contribute another \$900 loan capital, thus becoming entitled to a second delegate to the Central Board of Delegates.

and is entitled to buy direct from the nearest wholesale or other center at wholesale prices.

The branches are required to conform to certain strict business requirements. Thus, expenses may not be paid out of capital stock, but only from actual earnings on sales. This is stated to be no hardship where, as is required by the league, a store starts with a sufficient number of members and subscriptions for capital shares.

A centralized form of bookkeeping is in operation under which, it is estimated, the cost is about one-third the cost where each store does its own bookkeeping. There is, of course, the additional advantage of assured efficiency in bookkeeping. The charge made by the league for this service varies from \$15 to \$50 per month, according to the amount of business done by the store. Regular audits and inventories are made, and monthly meetings are held at each store. The buying is all done by the wholesale company of the league.

The league's operations, begun in California, have gradually extended into Arizona and New Mexico. It was reported that on October 6, 1919, the league had or was organizing branches at 32 towns in California and Arizona. Seventeen of these for which data were given had a combined membership of 3,600.

It is also reported that a cooperative grocery store in Hilo, Hawaii, known as the Rochdale Cooperative Association (Ltd.), with nearly 400 members, has affiliated with the Pacific Cooperative League.¹²

International relationships.—The league is a member of the International Cooperative Alliance. Early in September, 1919, several directors of the English Cooperative Wholesale Society visited San Francisco in the course of a tour made for the purpose of making international trade arrangements. It is stated that the directors have taken the preliminary steps for mutual buying between the Cooperative Wholesale Co. of San Francisco and their own society and that hereafter all purchases of the English society made in this section of the United States will be made through the Pacific Cooperative League.¹³ The league has also been asked by the Russian cooperative unions to act as their agent in purchasing in this country.

Effect of federation.—The president of the league says, "We have not had a single store fail. On the contrary, every store has not only paid its way from the start, but has paid a dividend."

He feels that there is an encouraging degree of individual cooperative development in the league stores, and the loss of initiative that might have been expected has not been evident.

There is more live cooperative sentiment and interest manifested and more attention to business than in the ordinary efforts of the old independent stores. The same strong men that come to the top in independent stores come to the front in the federated

¹² National Cooperative News, Chicago, Jan. 24, 1920.

¹³ Pacific Cooperator, San Francisco, September, 1919, p. 3.

stores, and with the advantage that their valuable services can be shared in over a larger area and not submerged in the struggle to keep one little place alive.

We believe we see in the federated plan a natural growth conforming to modern conditions, which are all in the direction of amalgamation. The problem of securing education and wholesale advantages for cooperative stores has been a serious one for many years. By a close form of federation I believe we are going to secure these results in a very successful measure.

Cooperative Wholesale Society of America.

The Cooperative Wholesale Society of America, with headquarters in St. Paul, is the wholesale society of the cooperative associations operating in Minnesota, the Dakotas, and Montana. The society was incorporated in the fall of 1917 with a capitalization of \$10,000, which was successively increased to \$100,000 in May, 1918, and to \$1,000,000 in July, 1918. Cooperative associations operating under the Rochdale plan, cooperative corporations, and unincorporated cooperative societies are admitted to membership on purchase of \$1,000 worth of capital stock. About 28 societies are now affiliated with the society, having a combined membership estimated at between 4,000 and 5,000. This number includes both producers' and consumers' associations, farmers' enterprises being prominent among the affiliated societies.

The wholesale does business at the current wholesale prices, and the surplus, after a deduction is made for reserve and educational funds, is returned to members in proportion to their patronage and to employees on their wages. Nonmembers receive one-half the rate of dividend of members.

The society is interesting because of the fact that it combines both phases of the cooperative movement. It buys for the consumers and sells for the producers, maintaining separate buying and marketing departments. The society states that, doing business as it does, at regular wholesale prices, it is "recognized as a regular wholesaler by the trade." The marketing department makes a specialty of marketing farm produce from its affiliated producers' societies, and it is stated that the activities of this department have resulted in a "substantial saving" to both the consumers' and producers' societies.

The association also maintains an organization department. It does not, however, undertake the establishment of a store except on request from the members of a locality. No attempt is made to induce cooperative associations and stores already established to affiliate with the society. Associations desiring affiliation are required to have a certain minimum amount of capital before being admitted, and must sign a contract binding themselves to do all their purchasing through the wholesale. All affiliated stores must conduct their business on a cash basis.

Cooperative Central Exchange.

The Cooperative Central Exchange is a Finnish wholesale society operating in Superior, Wis. The exchange was organized at a conference of 16 Finnish cooperative stores held at Superior in July, 1917. It now has a membership of 42 cooperative associations, located in Wisconsin, Minnesota, and Michigan, the combined membership of which is about 5,000. Eighty additional organizations are listed as purchasers through the exchange.

Its sales during 1919 amounted to \$310,322, and its net profits to \$7,330. During the fall of 1919 a manufacturing bakery department was established, specializing in rye-flour products, such as hardtack and toasts, the net profits of which, up to January 1, 1920, amounted to \$1,879.¹⁴

The exchange leaves the matter of affiliation with it to the local associations, but carries on educational work toward that end. Such associations, before being admitted to membership, must purchase at least one \$100 share of stock. The exchange furnishes aid in establishing new stores when requested to do so by the residents of a locality.

Branches and local cooperative organizations are not required to make all their purchases through the society. At the annual meeting of the exchange held on February 21 and 22, 1920, however, a resolution was passed "instructing affiliated stores to buy at least the commodities bearing the trade-mark of the exchange and all goods it can handle direct from manufacturers and producers."

At this meeting provision was made for an educational director who besides his regular educational duties, must "obtain and keep a list of persons in the employ of cooperative organizations and those seeking employment along those lines, and obtain reliable information in reference to their experience, in order to aid cooperative associations in obtaining employees."

Central States Cooperative Society.

It is estimated that there are approximately 90 cooperative stores in Illinois and the adjoining States, and that Illinois has about 75 of these. The Central States Cooperative Society, with offices in Springfield and a warehouse in East St. Louis, Ill., is the wholesale center for this group of cooperative associations. The society was organized in March, 1915, but the wholesale warehouse was not established until early in 1919, the society in the beginning carrying on simply a system of collective buying for its members. Though beginning with a capital of only \$300, the society has grown rapidly and now has a paid-in share capital of \$130,000, and a loan capital of \$25,000. At first the society was hampered by lack of working capital,

¹⁴ National Cooperative News, Chicago, Mar. 6, 1920.

and was compelled to "split profits" with jobbers, thus greatly diminishing its usefulness as a factor in reducing costs. In this district, as in the Seattle district, organized labor has been a strong supporter of the cooperative movement, and has come to the aid of the society with the trade-union funds as loan capital.¹⁵

A membership share in the society costs \$100, and no affiliating individual or organization may hold more than five shares of capital stock. Any amount of loan capital may be advanced. On both share and loan capital the society pays 5 per cent interest.

At the time of the organization of the society every effort was made to induce independent stores to affiliate with the society. Some 35 of the stores in Illinois, having an approximate membership of 200 each, have done so. Most of these handle groceries only, though some carry meats, fuel, boots and shoes, and a limited line of dry goods and millinery. The society also supplies goods to other societies which are not members but are interested, as cooperators, in supporting the wholesale.

Some organization work is done by the society, but only where there is sufficient demand on the part of members of the community to warrant it. This has been done, particularly in "industrial centers where there is a very great demand upon the part of the trade-unions to have a store started, where they have sufficient money to buy goods but do not care to assume responsibility for the organization and management of a store."

The society does not require local associations to fulfill any conditions as to membership or capital before being admitted to affiliation. Where a new association is being organized, however, the society advises that, before starting the store, at least 40 or 50 members who "know each other and can depend on one another to do what is right, be honest, help with the work, be loyal to the store, and do all their trading in their own store," be secured and that each contribute at least \$50 in share capital. Where the store is organized by the society the latter requires the manager to turn in to it weekly reports showing the amount of goods bought, the amount sold, the balance on hand, and the expenses incurred. All branches must make all their purchases through the wholesale society, except in the case of local produce or where the wholesale can not fill an order. The amount of dividend to be returned by each local association to its members is left entirely to the association itself.

It is stated that a number of the affiliated stores do not, in one respect, conform to the Rochdale plan—instead of selling goods at current prices and returning the surplus to their members as dividends, after making certain deductions for education, reserve,

¹⁵ Cooperation, New York City, September, 1919, p. 137.

depreciation, etc., they operate on the "cost plus" plan, under which the goods are sold at cost, plus a small percentage estimated as sufficient to cover expenses.

Tri-State Cooperative Association.

The Tri-State Cooperative Association is both a wholesale and a retail organization, operating on the chain system about 22 retail stores as branches, in western Pennsylvania, eastern Ohio, and northern West Virginia. All of its stores "are owned collectively by the members of all stores; they are managed by the Tri-State board of directors, officers, and central operating force, aided and assisted by local committees." Branches are required to make all their purchases, except those of meats and produce, through the wholesale department, unless the latter is unable to fill the order. Each store is entitled to two delegates to the quarterly meetings of the association, though the by-laws provide that the principle of proportional representation may be applied in the election of delegates. The association states that it sends organizers to establish branches only on request of 10 or more families in a community.

The association issues two kinds of stock—permanent and ordinary—paying 6 per cent interest on the former and 5 per cent on the latter. Ordinary stock may be withdrawn on 90 days' written notice to the board of directors. Every person desiring to join a Tri-State store must pay a membership fee of \$1, and purchase at \$10 a share at least five shares, two of which must be permanent stock.

A store already established may become an "integral part" of the association by accepting Tri-State stock for the value of its net assets. In such cases the rule of the association is that the store have a minimum membership of 100 and a capital of \$5,000. Hitherto the association has not strictly enforced this rule, but it states that it intends to do so in the future. It does, however, require that the stock issued to each member of the store shall be in the same amount—2 shares of permanent and 3 shares of ordinary stock—as is required in stores organized by the association. Such a store may also withdraw at any time "upon majority request of its membership and the signing by all of its members of a release authorizing the transfer of ordinary stock to the local organization."

Independent stores are admitted to membership in the wholesale on the purchase of \$200 worth of permanent stock. There are now over 20 such stores connected with the association on this basis.

The retail department is operated as a unit and a uniform dividend is returned in all of the stores irrespective of their several savings. Employees receive on their salaries a bonus at the same rate as the dividend. Each store participates in the earnings of the wholesale

department in proportion to the amount of its business with the latter.¹⁰

The All-American Farmer-Labor Cooperative Congress.¹

THE All-American Farmer-Labor Cooperative Congress was held in Chicago, February 12 to 14, 1920. It is reported that about 400 delegates were present representing cooperative, farmer, and labor organizations having an estimated membership of over 4,000,000.

The conference, an outgrowth of a similar meeting held in November, 1919² was called to consider means of reducing living costs by a system of direct trading between producer and consumer. Following are some of the subjects on the program for consideration: Direct trading—from producer to consumer; Mobilizing the farmer-labor forces; Cooperative banking and credits; The people's press; Standardization of cooperative business methods; Unification of the cooperative movement; Cooperative education; Social aspects of cooperation; Organized labor and cooperation.

Various speakers outlined the steps that have already been taken toward direct trading and the cooperative supply of necessities. Mr. O. P. Trask told of the action of the Brotherhood of Maintenance of Way Employees which has invested more than a million dollars in factories:

Our 387,000 members are section hands, trackmen, bridge workers. Their work is chiefly out of doors. They need clothes. We have cut their clothing cost 40 per cent by manufacturing and through buying from big manufacturers, who give us 40 per cent discount rather than see us go into the same business. We have mills in Ypsilanti, Kalamazoo, and Toledo making gloves, socks, sweaters, underwear. A shirt factory will be opened soon in Williamston, Mich. Our gloves are of the cheapest cotton or the best Australian wool, running from 17 cents to \$5 in price. One mill turns out 200 union suits a day. A surplus of 100,000 dozen mittens is to be turned over to farmers' cooperatives. A branch supply store is to be opened in Chicago for our 40,000 members there to buy clothes in.³

Reports made at the Congress show the farmers to be strong in support of cooperative enterprises. Mr. C. H. Gustafson, president of the Nebraska Farmers' Union, stated that that society, which owns

¹⁰ It is stated (National Cooperative News, Feb. 7, 1920) that at the annual meeting of the association, Jan. 26, the decision was made to separate the wholesale and retail departments and to apply for a separate charter for the retail department.

¹ Data on which this article is based were obtained from the Farmers' National Council, Washington, D. C.; The Survey, Feb. 21, 1920; the Nebraska Farmer, issues of Feb. 28 and Mar. 6, 1920; The Nation Mar. 6, 1920; and the New Republic, Mar. 10, 1920.

² For a short account of the November Congress, see MONTHLY LABOR REVIEW, February, 1920, pp. 133, 134.

³ The Survey, Feb. 21, 1920, p. 606.

creameries, flour mills, grain elevators, etc., is ready to furnish cooperative stores with the products of its members. Report was also made of the action of the National Federation of Gleaners, a Michigan farmers' fraternal organization, in taking over all the canning factories of Armour & Co. in that State. An account of the successful work of the Farmers' Union of Kansas was given by Mr. W. C. Landson, secretary of the union. He stated that during the 13 years of its existence it has increased its field of operations until it now includes more than 550 incorporated societies—elevators, retail stores, mills, shipping associations, insurance companies, auditing associations—doing a total business during the past 12 months of \$250,000,000. The union is now cooperating with the labor unions. A triple alliance of organized farmers, railroad brotherhoods, and organized labor was formed in the State of Washington last year, according to Mr. Wm. Bouck, master of the Washington State Grange.

The various phases of the work of the consumers' cooperative associations were discussed by Dalton T. Clarke and Carl E. Lunn, president and vice president, respectively, of the National Cooperative Association, and by Mr. Ernest O. F. Ames, president of the Pacific Cooperative League. The need of education in cooperation was urged by Dr. James P. Warbasse, president of the Cooperative League of America. Mr. Isaac Sherman, director of the New York branch of the Moscow Narodny Bank, gave a short account of the cooperative movement in Russia.

In a discussion of cooperative insurance, Mr. E. A. Tyler, of the Equity Cooperative Insurance Co. of St. Paul, spoke of the success of that company, which during its first year wrote \$2,000,000 worth of hail insurance.

The trade-unions of Seattle have been active along various lines of cooperative effort. The building of a labor temple and the establishment of a bank in which every depositor is a stockholder were described by Mr. Frank A. Rust, secretary-manager of the latter institution, the Seattle Trade-Union Bank. That the machinists of the same city have bought one-eighth of the stock in a large national bank and are now organizing a new bank to be located in a building of their own was stated by Mr. W. H. Johnson, president of the International Association of Machinists.

A feature of the convention was the display of cooperatively made goods.

The last day of the conference was devoted to the presentation and discussion of the reports of the various committees. Resolutions were passed indorsing the Rochdale system and favoring the establishment of cooperatively owned newspapers and of a cooperative news service.

A special committee was appointed to formulate plans for direct trading. Recognizing the need for education in cooperation, the congress adopted a resolution providing for organized educational work to be carried on by a department entirely separate from the financial and business department.

Perhaps the most important step was that taken with regard to banking and credit. Recognition was given to the fact that all permanent work along cooperative lines must be based on a system of cooperative credit. In this connection favorable mention was made of the work done by credit unions in the few States where the law permits their formation, and the congress declared itself in favor of legislation furthering cooperative effort. A permanent committee of five, consisting of Mr. Warren S. Stone, grand chief, Brotherhood of Locomotive Engineers, chairman; Mr. George P. Hampton, managing director, Farmers' National Council; Mr. C. H. Gustafson, president, Nebraska Farmers' Union; Mr. Sidney Hillman, Amalgamated Garment Workers; and Mr. F. A. Rust, secretary-manager, Seattle Trade-Union Bank, was appointed. This committee, which will serve without pay, was authorized "to advise upon the incorporation of banks to be established by cooperative labor and farmer organizations throughout the different States" and to take steps to secure necessary cooperative banking and credit union legislation.

It was recommended that a similar congress be held annually hereafter.

National Cooperative Union for Importation of Foodstuffs into Italy.¹

THE present tendency of the Italian Government is gradually to retire from the actual purchase and distribution of food supplies and to delegate questions of detail in this connection to central and local consortiums created for this purpose, while still retaining control over prices and the general policy determining purchases and imports.

In conformity with this tendency, a new autonomous body, under the name of National Cooperative Union for Importation, has been established by a royal decree. This body will provide for the importation of pork products, fats, milk products, and allied foodstuffs in such quantities as may be considered necessary, under the direction and control of the Government. Imports will be effected by means of purchases abroad, which the cooperative union will make either directly or through private firms. The union is authorized to assume the monopoly of receiving, storing, preserving, and eventually manufacturing and delivering these goods. The delivery

¹ Extracted from Commerce Reports, Feb. 12, 1920, pp. 865, 866.

will take place as indicated by the provincial distributing commissioners. The union may also undertake export activities.

The National Cooperative Union for Importation will have its central offices in Rome, with branches and agencies in the other cities of Italy and abroad; it is intended to operate until September 30, 1921, at which time its life may be extended.

Organizations dealing with food supplies, public bodies not instituted for profit, and cooperative companies, their federations and unions, will be admitted as members of the new body. Its initial capital is fixed at 10,000,000 lire (\$1,930,000, par).

Full administrative powers are vested in the board of directors, which will also establish the general principles and conditions on the basis of which purchases are to be made and the storage, manufacture, and preservation are to be carried out. Of the profits of this cooperative union, 20 per cent will be assigned to a reserve fund, and a further sum will be set aside sufficient to pay not more than 5 per cent on the capital invested. Of the amount available after these deductions have been made, 5 per cent will be assigned to the board of directors, 5 per cent to the personnel, and 85 per cent will be turned over to the State, which will distribute it, on the recommendation of the board of directors, to certain national cooperative bodies, with a view to effecting technical improvements in cooperative organizations existing for food supply and consumption.

Activities of the British Cooperative Societies During 1918.¹

THE latest report of the English and Scottish cooperative wholesale societies shows² that the 1,474 societies belonging to the Cooperative Union had a membership, in 1918, of 3,894,999, employed 164,383 persons, and did a business amounting to £248,979,685 (\$1,211,659,637, par).

The table following shows for each class of society the membership, sales, employees, and wages paid in each of the years 1913 to 1918.

¹ For other articles on the same subject see MONTHLY LABOR REVIEW, June, 1919, pp. 121-124; October, 1919, pp. 171-177; January, 1920, pp. 181-183.

² People's Yearbook, 1920, published by Manchester, England, Cooperative Wholesale Society (Ltd.), pp. 75-79.

OPERATIONS OF MEMBERS OF THE COOPERATIVE UNION, 1913 TO 1918, BY CLASS OF SOCIETY.

[£1 at par=\$4.8665.]

Year and class of society.	Number of societies.	Membership.	Share and loan capital.	Sales.	Net surplus.	Number of employees.	Salaries and wages paid.
Retail distributive societies:							
1913	1,387	2,878,648	£42,601,765	£83,590,374	£12,851,303	103,452	£5,903,943
1914	1,390	3,054,297	46,317,939	87,964,229	13,501,825	103,074	6,319,967
1915	1,375	3,264,811	48,848,596	102,557,779	14,960,086	109,449	6,749,725
1916	1,362	3,520,227	53,322,352	121,688,550	16,335,079	115,651	7,452,616
1917	1,366	3,788,490	55,746,493	142,003,612	15,916,591	118,718	8,465,663
1918	1,364	3,846,531	61,394,708	155,157,963	16,495,645	119,629	10,246,932
Distributive federations, 1918	5	61	31,579	121,597	7,637	31	2,878
Productive societies:¹							
1913	108	34,662	1,701,033	3,710,234	253,014	10,442	596,380
1914	108	36,880	1,822,349	3,800,627	276,792	10,725	613,555
1915	103	34,912	1,688,118	3,860,052	316,896	10,657	634,921
1916	101	35,142	1,771,604	4,461,491	333,842	10,284	732,106
1917	97	36,358	1,804,954	5,146,459	359,740	10,038	766,846
1918	95	37,393	1,974,479	5,714,041	398,602	9,745	912,785
Supply associations:							
1913	4	95,061	563,240	2,078,661	49,231	1,956	179,688
1914	4	95,117	572,010	2,030,245	41,470	2,099	183,528
1915	4	8,473	483,951	3,280,860	54,151	1,799	172,167
1916	4	8,560	435,239	3,402,308	92,328	1,661	196,866
1917	3	8,282	438,388	1,712,718	58,602	1,816	164,195
1918	3	8,349	452,055	1,763,450	58,122	1,805	177,841
English Cooperative Wholesale Society:							
1913		² 1,168	6,320,763	31,371,976	636,119	20,994	1,383,254
1914		² 1,193	6,301,017	34,910,813	840,069	23,190	1,539,354
1915		² 1,195	6,641,598	43,101,747	1,086,962	23,924	1,777,406
1916		² 1,189	7,109,291	52,230,074	1,519,005	22,215	1,819,727
1917		² 1,192	6,937,325	57,710,133	1,315,155	22,777	1,983,869
1918		² 1,200	11,896,941	65,167,960	160,538	24,100	2,529,137
Scottish Cooperative Wholesale Society:³							
1913		² 268	3,696,415	8,964,033	340,730	8,685	405,815
1914		² 266	4,130,170	9,425,383	393,115	8,877	530,378
1915		² 234	4,464,633	11,363,075	456,516	9,103	554,634
1916		² 262	4,564,637	14,502,410	501,531	8,307	593,165
1917		² 263	4,257,818	17,079,842	500,915	8,522	655,874
1918		² 261	4,646,296	19,519,485	547,993	8,324	797,510
Irish Agricultural Wholesale Society:							
1915		² 327	28,225	375,379	3,141	81	5,400
1916		² 381	65,518	479,877	4,989	100	6,854
1917		² 453	83,187	651,567	5,577	125	10,730
1918		² 511	25,975	914,242	7,527	156	17,109
Total:							
1913	1,508	3,011,390	54,919,381	130,035,894	14,260,414	142,995	8,491,448
1914	1,510	3,188,140	58,704,695	138,473,025	15,204,098	148,264	9,213,464
1915	1,497	3,310,524	62,230,430	165,034,195	17,003,956	155,379	9,928,926
1916	1,481	3,566,241	67,348,808	197,295,322	19,150,021	158,715	10,838,075
1917	1,478	3,835,376	69,355,148	224,913,795	18,194,600	162,503	12,086,853
1918	1,474	3,894,999	80,473,150	248,979,685	17,702,567	164,383	14,734,284

¹ Exclusive of the wholesale societies.² Number of member societies.³ This society also pays a bonus on wages of its employees. The amounts thus paid have been—1913, £16,583; 1914, £18,783; 1915, £13,017; 1916, £12,614; 1917, £10,016; 1918, £9,348.

VOCATIONAL EDUCATION.

Recent Development of Part-Time or Continuation Schools in the United States.

WHEN the Federal Vocational Education Act became a law on February 23, 1917, only eight States, namely Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Indiana, Wisconsin, and California, had developed systems of vocational education. Under the law three forms of vocational education may exist: All-day schools, part-time schools, and evening classes. Of these three types the part-time schools have perhaps the most direct effect upon industry, as the instruction must be given during hours of employment. While at the time of the passing of the law provision for part-time schools was admittedly desirable and part-time classes conducted for various purposes under various auspices existed here and there, but two of the States, Wisconsin and Pennsylvania, had established compulsory instruction of this character for young workers over 14 years of age.

The increasing interest in vocational training of this character is manifest in the fact that on January 1, 1920, 25 States, most of which had enacted legislation during 1919, had laws requiring attendance upon part-time schools. The following table shows data relative to such schools in these 25 States:

SUMMARY OF PRINCIPAL REQUIREMENTS OF LAWS PROVIDING FOR PART-TIME SCHOOLS, BY STATES.¹

State.	Minimum number of minors required to establish classes.	Ages of required attendance.	Hours per week required attendance.	Length of school year.	Time for holding classes.
Arizona.....	15	14-16	5	150 hours.....	8 a. m.-6 p. m.
California.....	12	14-18	4	36 weeks.....	8 a. m.-5 p. m.
Connecticut.....	(²)	14-16	8	16 weeks.....	Evening classes.
Illinois.....	20	14-18	8	36 weeks.....	8 a. m.-5 p. m.
Indiana.....	(³)	14-16	4	Full school year...	8 a. m.-5 p. m.
Iowa.....	15	14-16	8	Full school year...	8 a. m.-6 p. m.
Massachusetts ³	200	14-16	4	Full school year...	8 a. m.-5 p. m.
Michigan ⁴	50	14-18	8	Full school year...	8 a. m.-5 p. m.
Missouri.....	25	14-16	4	Full school year...	8 a. m.-5 p. m.
Montana.....	15	14-16	4	Full school year...	8 a. m.-6 p. m.

¹ U. S. Federal Board for Vocational Education. Vocational Summary, June, 1919, p. 22. U. S. Bureau of Education. School Life, Dec. 15, 1919, pp. 14-16. Washington, 1919.

² Every child who possesses an employment certificate and has not completed elementary schools.

³ Every city or town.

⁴ Every school district of 5,000 population or more.

SUMMARY OF PRINCIPAL REQUIREMENTS OF LAWS PROVIDING FOR PART-TIME SCHOOLS, BY STATES—Concluded.

State.	Minimum number of minors required to establish classes.	Ages of required attendance.	Hours per week required attendance.	Length of school year.	Time for holding classes.
Nebraska.....	15	14-16	8	144 hours.....	(5).
Nevada.....	15	14-18	4	Full school year...	8 a. m.-6 p. m.
New Hampshire ^a	(5)	16-21	(5)	(5)	(5).
New Jersey.....	20	14-16	6	36 weeks.....	8 a. m.-5 p. m. (except Saturday and Sunday).
New Mexico.....	15	14-16	5	150 hours.....	8 a. m.-6 p. m.
New York ^a	20	14-18	4-8	Full school year...	8 a. m.-5 p. m.
Oklahoma.....	20	16-18	(5)	144 hours.....	(5).
Oregon.....	15	14-18	5	Full school year...	8 a. m.-6 p. m.
Pennsylvania.....	(5)	14-16	8	(4)	8 a. m.-5 p. m. (except Saturday).
Rhode Island ^a	20	16-21	(5)	200 hours.....	(5).
South Dakota ^a	(5)	16-21	8	200 hours.....	Evening school.
Utah.....	15	14-18	4	144 hours.....	8 a. m.-5 p. m.
Washington.....	15	14-18	4	Full school year...	8 a. m.-5 p. m.
West Virginia.....	(5)	14-16	5	20 weeks.....	(5).
Wisconsin.....	(7)	14-17	(5)	Full school year...	(5).

^a Every school district of 5,000 population or more.

^b Not specified.

^c Americanization classes only.

^d Every child not attending some other school. Apprentices required to attend vocational school five hours per week for first two years of apprenticeship.

The application of these State laws differs with the varying conditions relative to population, education, and industry, in the different States, and includes numerous details not shown in the table. Among these are the questions of exemption, State aid, substitution of regular day schools or evening classes for part-time classes, the establishment of standards, penalties for violation of the law, and the inclusion of part-time instruction on the employer's time.

The laws of Arizona, Illinois, Massachusetts, Michigan, Missouri, Montana, Nevada, New Mexico, Oregon, Utah, and Washington specifically state that hours of attendance upon part-time or continuation schools must be construed as a part of a minor's lawful employment. In Nebraska, New Jersey, New York, Oklahoma, and West Virginia, the employer is obliged to permit attendance. Illinois makes home work a lawful employment, while the Wisconsin law requires all apprentices to attend a vocational school for at least five hours a week during the first two years of training, for which time they are paid at the regular rate per hour.

States in which the law has been adopted provide penalties for its nonenforcement, applying usually both to the parent or guardian of a delinquent child and to the employer as well. In many cases the minor's employment certificate may be revoked if he fails to attend part-time classes. Sometimes employment ceases when attendance ceases. New York State, in addition to holding the parent and employer responsible, provides for withholding the State public school funds in case of failure to comply with the law. New Hampshire,

Rhode Island, South Dakota, New York, Utah, and California require evening or day Americanization classes for which part-time instruction may be accepted. State and Federal funds in varying amounts may be used to defray the expenses of part-time classes.

Part-time instruction is intended for employed minors over 14 years of age. It may be a trade-extension course which is merely supplemental to the trade or industrial pursuit in which the minor is employed; it may be a preparation for a trade entirely different from the one in which he is earning a living; or it may be of a general character suited to the development of the civic and vocational intelligence of the young worker. In any case these schools and classes must be operated for at least 144 hours every year during the hours of regular employment. The instruction in the trade courses may consist of actual experience in the shop, of theory related to the processes taught, or of both so arranged as to divide the time between the two.

One of the difficulties met in the introduction of these classes is the arrangement of the hours of attendance. While the school is the final judge in this matter the conditions under which minors are employed determine in large measure the adjustment made, a great deal of elasticity being allowed. It has been found that for workers in stores there has been a tendency to divide the time among the working-days of the week, the morning hours from 8 to 10 having been found most suitable and convenient. Manufacturing establishments, on the other hand, often give all the time in a block.

The shift system has also been successfully introduced. Under this system the minors work in two shifts of five hours each, with a 3-hour school period. Such an arrangement insures compliance with the law, secures a full day's production and affords an educational opportunity for children who are compelled to work.

Iowa, which has recently provided for the establishment of compulsory part-time continuation schools, is inaugurating a dull season short course for painters. According to the present plan¹ the State will be divided into six districts with one center in each. The course of instruction will continue for a period of 3 weeks, 8 hours a day for 6 days in each week, making the required 144 hours. At Newton, Iowa, boys being trained as machinists and pattern makers attend the local high school three hours in the morning and work in the machine shops of two plants four hours in the afternoon. In this way they combine instruction in related subjects and practice in the trades under trade conditions. The boys do not in this case receive pay for the work in the shops.

Another difficulty met in the operation of part-time or continuation schools is the lack of properly trained teachers. It is obvious that a

¹ U. S. Federal Board for Vocational Education, Vocational Summary, January, 1920, p. 164.

teacher with an excellent academic training might prove a complete failure in attempting to explain the fundamentals of a trade. The majority of skilled workmen, on the other hand, would be quite as unable to present the theory of certain industrial processes, or even to impart to others a knowledge of the actual operation of the processes. The problem then is to secure as teachers persons who combine with a thorough knowledge of the trade and good personality, ability to express themselves readily. Thus far most of the teachers have been found in the industries themselves. Efforts are being made, however, to give teachers an all-round training for these positions through courses which are being introduced in a number of schools and even in some of the universities of the country.

The need for part-time education is evident from the large number of children who leave school at an early age and drift into industry without any preparation for it or any appreciation of the necessity of preparation. It is estimated that the number² of minors in the United States between 14 and 15 years of age gainfully employed during 1918 was approximately 800,000 boys and 400,000 girls, or more than half of the whole number of children between those ages. Owing to the pressure of keen competition which has increasingly demanded minute specialization upon particular processes rather than general training in a trade, the old apprentice system has almost broken down in some trades and no substitute has as yet been offered for it. As a result industry is faced with an impoverishment of the human factor and with a lack of trained workmen who can be depended upon to secure quality as well as quantity of production. The part-time and other vocational schools, though not designed to take the place of apprenticeship, may supplement this ancient form of trade training where it exists, and in the trades where it is lacking, will undoubtedly serve as a connecting link between the school and the realities of life and labor. To industrial establishments they offer an unexcelled opportunity to develop a trained, intelligent, thinking force, at a relatively small expense.

Vocational Training for Women in Industry.

THE following report on vocational training of women in industry was prepared by a special committee on women in industry of the National Society for Vocational Education, and presented at the joint convention of the National Society for Vocational Education and the Vocational Education Association of the Middle West held in Chicago February 19 to 21, 1920. It is believed that the report is of considerable interest to industrially

² U. S. Federal Board for Vocational Education. Second annual report, 1918, p. 52. Washington, 1919.

employed women as it gives the problems of vocational education for women in industrial fields and suggests means for attaining desired ends.

Report of Committee on Women in Industry.

Every citizen at the end of his or her period of education (all-day school attendance) should be engaged in some form of productive work. The right type of home making is productive work of the highest value to the Nation, but for a great majority of women there is a considerable period between school attendance and home making during which women should engage in some other productive occupation.

The war service of women workers in many types of skilled and unskilled operative and directive work in industry demonstrated beyond further question their ability to assume work calling for a high degree of responsibility and skill. This demonstration of fitness, coupled with the necessity for economic independence for all citizens in a democratic social order, strengthens substantially the claims for the industrial education of women.

Vocational education for trade and industrial occupations for women should be greatly extended, therefore, in order that each individual girl or woman may be assured the opportunity of doing the highest type of productive work of which she is capable during the period previous to marriage, or if she does not marry, for the period of her working life, or for the married woman who, because of widowhood, desertion, childlessness, or some other deviation from normal married life, returns to industry as a wage earner.

Nothing less than a recognition of these problems which confront women wage earners, and serious constructive education to meet them, can insure the best type of womanhood and integrity of workmanship among woman workers.

Vocational education for girls and women is a twofold problem: (a) Preparation for wage earning, and (b) preparation for home making. This discussion, however, is confined to the problems of vocational education for wage-earning occupations in industrial fields.

Facts Relative to and Problems of Industrial Education for Girls and Women.

1. Woman wage earners now constitute an important factor in industry and the number is increasing both absolutely and relatively.

1900: 5,319,397—18.8 per cent of the women over 10 years of age were wage earners.

1910: 8,075,772—23.4 per cent of the women over 10 years of age were wage earners.

1919: It was estimated that 11,000,000 of the women over 10 years of age were wage earners.

2. Industries employing woman workers represent a wide diversity of industrial employments. The United States Census of 1910 (Vol. IV, p. 53) lists woman workers in every one of the 127 types of employment except locomotive firemen and engineers; plumbers, gas and steam fitters; railroad brakemen and conductors; teamsters; laborers (road and street building); draymen and expressmen; motormen; policemen; sailors and marines. The census of 1920 will reduce this list of exceptions.

3. Women of all ages are wage earners. (United States Census, Vol. IV., p. 69:)

Age group.	Number of women at work.	Per cent of women at work.	Proportion of women at work.
10 to 13 years.....	286,946	8.0	1 out of every 12
14 to 15 years.....	350,140	19.8	1 out of every 5
15 to 20 years.....	1,847,600	39.9	2 out of every 5
21 to 44 years.....	4,302,969	26.3	1 out of every 4
45 years and over.....	1,288,117	13.7	1 out of every 7

4. The largest age group of woman workers is 14 to 24 years; 24 is generally conceded as the usual age for marriage.

5. Because of the immaturity, and in many cases the home residence, of a considerable proportion of this 14 to 24 year group, self-supporting women living away from home and older women responsible for family support are frequently forced to accept wages insufficient to provide a safe standard of living or to insure protection in case of illness or old age. Woman wage earners are entitled to the financial consideration of their needs as workers and as citizens.

6. Specialized machines and scientific organization have created two main types of industrial occupations: (a) The operative type, in which the worker performs one or more special operations or processes; and (b) the directive type, in which a foreman or forewoman directs the organization of the factory.

7. Many industries in which young women are employed are organized on a basis of extreme specialization or subdivision of work in which no traditions of apprenticeship exist and in which shifting from one specialized operation to another is difficult. Because of this condition many woman workers remain excessively long on operative specialties which can be learned in comparatively short periods of time, when their increasing maturity, experience, and training should assure them of advancement to better paid specialties or to directive or more expert work,

8. Woman workers (not the individual woman) are now regarded as a permanent factor in industry and not as an emergency labor reserve. Education for industrial occupations, therefore, demands due consideration in a program of vocational education for women which recognizes preparation for wage earning as well as preparation for home making.

9. The stigma which social prejudice has placed upon industrial work for women has militated strongly against the development of industrial education for girls and women. This applies to industrial occupations in which women have long been employed as well as to newer types of work developed under the modern factory system.

10. Woman workers since the advent of the factory system have been exploited workers. Because of the prejudice against industrial work, the lack of apprenticeship systems of training, and the slow development of other forms of trade organization among women, woman workers have been largely untrained for their work and uninformed about conditions of their labor and the value of that labor.

Protective legislation alleviates these conditions and it necessarily antedates consideration of vocational education, but education, both general and vocational, must ultimately develop in women the ability to formulate and demand for themselves the protection and privileges necessary for successful and satisfactory employment.

11. Under the terms of the Federal Vocational Act equal opportunity is possible for girls and women as for boys and men. That States and local communities have not taken advantage of available resources is evident from the third annual report of the Federal Board for Vocational Education, which shows that only the smallest beginnings have been made in the establishment of systematic vocational education for girls and women in industrial fields (Vol. I, Table 18, p. 220).

Number of female pupils enrolled in trade or industrial schools in the United States for year ending June 30, 1919.

Evening schools.....	1, 391
Part-time schools.....	5, 340
All-day schools.....	2, 058
Manhattan Trade School ¹	1, 495
	3, 553

¹ Omitted in Federal Board report.

The complexity of the social, economic, and educational problems of vocational education is recognized, but the nature of the problem should insure open-minded study and experimentation in developing and putting into effect an adequate program for industrial education for girls and women commensurate with the importance of the problem. State boards and the Federal Board for Vocational Education share this responsibility.

12. The States are charged with the responsibility of selecting and training supervisors and teachers for the vocational work of the State. The supply of women for State and city supervisory positions and for teaching positions in the vocational schools is far below the demand. Lack of supervisors and teachers, in turn, retards the development of vocational schools and desirable courses and standards of instruction.

Solutions of these Problems.

1. While in protective legislation, organization of workers, and education of employers and consumers are to be found some remedies for difficulties encountered by girls and women in industry, the remedy of most importance is better general education and better vocational education for those who compose the army of girl and woman workers.

2. A considerable part of both these forms of education should be assured prior to the beginning of wage-earning work, but much of it can only be given parallel to the pursuit of such work or during periods when the worker shall voluntarily or involuntarily discontinue wage earning.

3. One fundamental aim of both general and vocational education should be to give girls an understanding of the conditions of wage-earning work, and the possibilities available for the protection of health, morals, earning capacity and promotion to higher levels of employment.

4. The fundamental aim of vocational education should be to fit the worker to pursue effectively some specialized work, to assure advantageous entrance to a wage-earning occupation, and to make it clear that employment in one phase of specialized work is but one stage from which she should advance as experience, maturity, and additional training justify advancement.

5. One of the primary aims of up-grading vocational education should be to fit the worker for promotion to more advanced stages of operative work, or for directive work, or positions of leadership.

6. An important aim of vocational education at the later stages should be to fit women, who expect to remain in wage-earning work and those who return to wage earning when their children have passed beyond the need of mother care, for productive work in occupations which demand maturity, experience, and special training. This should be done in order that these women may not be brought into sharp competition with every young woman worker, no matter what may have been the special training of the latter.

7. Educators, employers, and others interested in or responsible for the education of wage-earning girls and women must recognize the weight of social prejudice against industrial occupations and actively engage in the dissemination of intelligent information which shall bring about a realignment of attitudes among employers, workers, and the community at large toward women in industrial callings and develop a demand for education and vocational training which shall result in knowledge of the job, and group consciousness and working integrity among woman workers. This task is urgent, and necessarily a part of the working program, for the development of all-day, part-time, and evening courses for girls and women of all ages and grades of experience depends largely upon a measure of social approval.

8. The States and local communities look to the Federal Board for Vocational Education for help in the development of a constructive program of vocational educa-

tion for industrial occupations for women, which includes ways and means for developing a demand for industrial education as well as courses of study, and dynamic assistance in putting it into operation. This help should be commensurate with the numbers of workers involved and their rights as workers and citizens.

To Attain these Ends.

1. General education for all girls (and boys) extending over at least the first 8 or 10 years of school attendance should be insisted upon in order that intelligent, right-minded participation in home and community life and State and national activities may be assured.

2. Vocational education for all prospective workers should be assured in all-day vocational courses before entering wage earning or in part-time courses which supplement occupational experience and prepare for promotion. While the all-day vocational school or department in most communities serves fewer students than part-time and evening courses, it has been shown that the all-day courses tend to lengthen the school attendance of girls contemplating wage earning and that vocational preparation tends to create a demand for further trade training and education in part-time or evening trade extension courses.

3. Vocational education supplementing the daily occupation, particularly part-time day courses, should be assured to 16 or 18 years of age. Special effort should be made to develop these courses in places of employment when instruction can be given more effectively and advantageously (without loss of time, suitable equipment, illustrative material, subject matter for daily lessons) in the business establishment than in the school building. Instruction that carries its point—that proves its worth in the daily employment—increases the demand for education both general and vocational. Passive approval of this form of education will not bring results. Part-time vocational education is pioneer education and to insure its success it requires vigorous propaganda on the part of educational leaders and genuine belief in it, as well as good teaching on the part of the teachers who undertake the work.

4. Since stimulation, promotion, and development of vocational education is of paramount importance in the ever-widening horizon of women's employment, a staff of workers commensurate with the importance of the problem should be provided by both the State and Federal authorities. Each of the regional fields should have a woman agent for industrial education charged with the duties of stimulating and developing courses for the provisions for teacher-training courses and all-day, part-time, and evening vocational courses for which Federal funds of the Smith-Hughes Act provide.

Each State should have a woman in charge of industrial education for girls and women charged with the duty of stimulating and developing the work within the State as outlined by the State board and approved by the Federal Board for Vocational Education.

5. It is of utmost importance that each State make definite provisions for teacher-training courses for State supervisors and teachers for the vocational schools of the State. So long as State and national programs of vocational education depend upon stimulation for their ultimate acceptance and effective operation, definite and sustained effort should be made to attract well-educated, well-trained women as well as men into the field of vocational education.

COLLECTIVE BARGAINING.

New Agreement Affecting the Men's Clothing Industry in Chicago.

A NEW agreement granting increases in wages to piece and time workers in the men's clothing industry in Chicago has been entered into, effective December 15, 1919, by the Amalgamated Clothing Workers of America and Chicago clothing manufacturers. The considerations that figured in the final adjustment, as presented by the employees, were as follows:

1. Increased cost of living.
2. Desire for improvement in standards of living, if the industry can afford it.
3. The great demand for labor in this industry, which would have permitted greatly increased wages by bargains made by individual workers, had not the agreement stabilized and moderated rates of wages.
4. The increased market value which labor in this industry now commands, as shown by increases in wages in other cities.
5. The efficiency of this industry in maintaining constant production, thereby making its important contribution to public welfare, both in the economic aspect of doing its share toward keeping costs down as compared with the wastefulness of strikes, and in the general social and public aspect of maintaining order and peace in industry in the midst of a generally disturbed condition in the labor world.
6. The efficiency of the Chicago market, in particular, as a piecework market, which makes it possible for the Chicago market to do at least as well by the workers as other less efficient markets, and makes any other attitude hard to justify.

Against any increase at this time it was maintained by the representatives of the firms:

1. That increases in wages in the industry have more than kept pace with increased cost of living.
2. That whatever may be true as to the demand for labor and the consequent market rate of wages, there is at this time a paramount duty to the public not to increase the cost of the necessities of life unless there is a real exigency, which in this case does not exist.
3. That this industry is now in a highly favorable condition, as compared with other industries, both national and local, especially when it is considered that only about one-third of those employed are heads of families.
4. That since deflation is bound to come sooner or later, every increase which adds to costs has a tendency in the wrong direction, and will make the inevitable shrinkage more keenly felt.
5. That the indirect effects on prices and industry of any increase in wages at this time ought to be considered.
6. That local conditions in the Chicago market, both within the industry and in the relation of this to other industries, make any change undesirable from the point of view of the best interests of the agreement into which many of the firms have recently entered.

After considering and weighing these and other arguments presented the board of arbitration, to which under existing agreement the question of changes in wage rates was automatically referred, issued the following award:

Beginning December 15, 1919, an increase shall be added to the piece and wage rates now in existence under the agreements, in the shops of the firms and their contractors. The new rates thus established shall prevail up to June 1, 1920, except when detailed changes may be ordered by the board of arbitration on recommendation of either of the trade boards.

The increase shall be applied as follows:

An increase of twenty per cent (20%) shall be given to sections or occupations, where the average earnings or wages on a forty-four hour basis are \$30 or less per week, and five per cent (5%) to sections where the average earnings on a forty-four hour basis are \$50 or more per week. An increase equivalent to \$6 per week shall be given to sections where the average earnings are from \$30 to \$49.99 per week.

An increase of 20 per cent shall be given to all week workers now receiving less than \$30 per week; an increase of \$6 per week to week workers now receiving from \$30 to \$49.99 per week; and an increase of 5 per cent to week workers now receiving \$50 or more per week.

In piecework sections, the equivalent of the increase shall be calculated and added to the existing piece rates.

In addition to the increases granted above, the board will grant further increases in specific sections to be recommended by the committee appointed to investigate the subject of relative disparities in rates now existing.

The increase shall apply to all sections and classes of labor represented by the Amalgamated Clothing Workers of America, provided that nothing in this shall be taken to prejudice certain problems of reclassification which are now pending before the board of arbitration under the Hart, Schaffner & Marx agreement. Pending the completion of such reclassification, and a final decision, such persons as were granted increases by the board under the agreement of July 8 shall be presumed to be entitled to the increases herein provided.

Inexperienced persons employed in the trade less than three months at week work shall not be included in the award.

Persons who are working on piece-rate operations on a weekly minimum guaranty shall be considered pieceworkers and not week workers.

In calculating the classifications of piecework sections for the purpose of applying these increases, the same methods and practices shall be employed as in the adjustment of July, 1919.

The board hereby authorizes the establishment of commissions, under the chairmanship of Dr. Millis and Mr. Mullenbach, with representation of employers and workers, respectively, selected by themselves, to elaborate and recommend to the board standards of wages and production, and classifications of week workers. The chairmen shall have the deciding votes in cases of disagreement, and such recommended standards and classifications, when approved by the board, shall become a part of this award.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in February, 1920.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in February, 1920, from representative establishments in 13 manufacturing industries. Comparing the figures of February, 1920, with those of identical establishments for February, 1919, it appears that in 11 industries there was an increase in the number of persons employed, while in 2 there was a decrease. The largest increase, 124.9 per cent, is shown in woolen, while cotton finishing and men's ready-made clothing show percentage increases of 52.3 and 50.2, respectively. Decreases of 15.9 per cent in car building and repairing and 9.7 per cent in cigar manufacturing are shown.

Twelve of the 13 industries show an increase in the total amount of the pay roll for February, 1920, as compared with February, 1919, and 1 shows a decrease. The most important percentage increases, 252.4 and 137.9, appear in woolen and men's ready-made clothing. The next largest increases are 96.9 per cent in cotton finishing, 65.9 per cent in silk, and 65.6 per cent in cotton manufacturing. A decrease of 13.3 per cent is shown in car building and repairing.

The increases in the volume of employment over last year are largely due to labor troubles and the cancellation of Government contracts in January, 1919, which decreased employment and production in February, 1919.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY, 1919, AND FEBRUARY, 1920.

Industry.	Estab-lish-ments reporting for February, both years.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			February, 1919.	February, 1920.	Per cent of increase (+) or decrease (-).	February, 1919.	February, 1920.	Per cent of increase (+) or decrease (-).
Automobile manufacturing...	37	1 week...	89,846	126,149	+ 40.4	\$2,591,511	\$4,065,361	+ 56.9
Boots and shoes.....	69	do.....	58,738	63,760	+ 8.5	1,177,502	1,462,796	+ 24.2
Car building and repairing...	50	1 month.	62,279	52,373	- 15.9	3,544,944	3,072,663	- 13.3
Cigar manufacturing.....	55	1 week...	18,363	16,581	- 9.7	286,980	331,662	+ 15.6
Clothing, men's ready-made..	45	do.....	19,117	28,710	+ 50.2	401,517	955,048	+137.9
Cotton finishing.....	16	do.....	8,394	12,787	+ 52.3	145,676	286,824	+ 96.9
Cotton manufacturing.....	57	do.....	50,115	57,374	+ 14.5	709,971	1,175,401	+ 65.6
Hosiery and underwear.....	62	do.....	28,559	32,344	+ 13.3	402,594	593,178	+ 47.3
Iron and steel.....	93	1 month.	147,521	149,904	+ 1.6	10,043,797	11,073,588	+ 10.3
Leather manufacturing.....	33	1 week...	16,448	18,444	+ 12.1	365,081	479,031	+ 31.2
Paper making.....	57	do.....	31,126	32,440	+ 4.3	646,732	837,179	+ 29.4
Silk.....	50	2 weeks...	17,667	21,279	+ 20.4	594,993	987,223	+ 65.9
Woolen.....	47	1 week...	18,252	41,042	+124.9	291,152	1,026,052	+252.4

Comparative data for February, 1920, and January, 1920, appear in the following table. The figures show that in 3 industries there was an increase in the number of persons on the pay roll in February as compared with January and in 10 industries a decrease. Several factors contributed to produce a decrease in employment in February. The most important were seasonal reductions, the tie-up of transportation during the first part of the month on account of snowstorms, lack of raw material, and much sickness among employees during the influenza epidemic. The increases in the number of persons employed are 1.7 per cent in automobile manufacturing, 1.6 per cent in men's ready-made clothing, and 1.6 per cent in iron and steel. The greatest decrease—4.5 per cent—is shown in cigar manufacturing.

In comparing February with January, 2 industries show an increase in the amount of money paid to employees, while 11 show a decrease. The increases are 5.9 per cent in iron and steel and 2.2 per cent in silk; the largest decreases—10.4, 7.9, and 6.7 per cent—are shown in cotton finishing, cigar manufacturing, and boots and shoes.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN JANUARY AND FEBRUARY, 1920.

Industry.	Estab- lish- ments report- ing for Janu- ary and Febru- ary.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			Janu- ary, 1920.	Febru- ary, 1920.	Per cent of in- crease (+) or de- crease (-).	January, 1920.	February, 1920.	Per cent of in- crease (+) or de- crease (-).
Automobile manufacturing...	38	1 week..	114,565	116,534	+1.7	\$3,818,650	\$3,726,551	- 2.4
Boots and shoes.....	68	do.....	63,792	62,791	-1.6	1,540,661	1,438,081	- 6.7
Car building and repairing....	49	½ month.	47,195	47,020	- .4	2,853,315	2,772,315	- 2.8
Cigar manufacturing.....	55	1 week..	17,522	16,732	-4.5	364,246	335,608	- 7.9
Clothing, men's ready-made..	48	do.....	28,372	28,838	+1.6	996,048	990,785	- 3.5
Cotton finishing.....	16	do.....	13,123	12,787	-2.6	320,070	286,824	-10.4
Cotton manufacturing.....	53	do.....	46,248	45,132	-2.4	966,617	927,479	- 4.0
Hosiery and underwear.....	61	do.....	32,295	31,993	- .9	614,905	587,952	- 4.4
Iron and steel.....	86	½ month.	141,787	147,151	+1.6	10,298,643	10,992,358	+ 5.9
Leather manufacturing.....	32	1 week..	18,497	17,959	-2.9	478,525	465,833	- 2.7
Paper making.....	55	do.....	31,990	31,781	- .7	821,961	818,942	- .4
Silk.....	50	2 weeks..	21,337	21,279	- .3	965,692	987,223	+ 2.2
Woolen.....	47	1 week..	41,376	40,767	-1.5	1,076,118	1,042,123	- 3.2

In addition to the data presented in the above tables as to the number of employees on the pay roll, 80 plants in the iron and steel industry reported 120,388 employees as actually working on the last full day of the pay period reported for February, 1920, as against 120,262 for the reported pay-roll period in February, 1919, an increase of 0.1 per cent. Figures given by 77 establishments in the iron and steel industry for February, 1920, and January, 1920, show that 119,171 employees were actually working on the last full day of the pay period reported for in February, 1920, as against 120,693 for the period in January, 1920, a decrease of 1.3 per cent.

Changes in Wage Rates.

DURING the period January 15 to February 15, 1920, in 10 of the 11 industries which reported changes in wage rates, only increases were reported; in 1 industry 1 establishment reported a decrease. Two establishments reported no change. Of the establishments reporting, many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

Automobile manufacturing: Two establishments reported an increase of 2 per cent, affecting 40.4 per cent of the force in one plant and 4 per cent of the employees in the other concern. One firm granted an increase of 8 per cent to 11.8 per cent of the men, and $4\frac{1}{4}$ per cent of the workers in one factory were given a 4 per cent increase.

Boots and shoes: Two establishments gave a 25 per cent increase, affecting 50 per cent of the employees in one plant and 40 per cent of the men in the other concern. About 32 per cent of the force in one firm were granted an increase of 22 per cent. A 15 per cent increase, affecting 15 per cent of the employees, was reported by one plant. One establishment gave a 10 per cent increase to 35 per cent of the force while another factory reported an increase of about 10 per cent, affecting 4 per cent of the force. One concern granted 5 per cent of the men a 6 per cent increase. One firm reported an increase but made no further statement. The 10 per cent bonus was discontinued by one firm.

Cigar manufacturing: A 14 per cent increase, affecting 90 per cent of the employees, was given by one firm. All the force in one concern received a 10 per cent increase, while 90 per cent of the men in another factory were given a wage rate increase of approximately 10 per cent. One establishment reported a $7\frac{1}{2}$ per cent increase, affecting 85 per cent of the employees.

Men's ready-made clothing: All of the employees in one establishment received a 10 per cent increase.

Cotton finishing: One firm reported a 14 per cent increase, affecting 9 per cent of the employees.

Cotton manufacturing: All the employees in two plants received a wage rate increase of 10 per cent, while another firm granted an increase of approximately 10 per cent to the entire force. One establishment gave a 7 per cent increase to all the men and one factory reported an increase of about $3\frac{1}{2}$ per cent, affecting all of the force.

Hosiery and underwear: One establishment reported an average increase of about 13.2 per cent to about 8 per cent of the employees. All of the employees in one firm received a wage rate increase of $12\frac{1}{2}$ per cent. Three concerns granted a 10 per cent increase, affecting all of the force in two factories and 25 per cent of the men in the third establishment. Twenty per cent of the employees in one mill were granted an increase of approximately 8 per cent.

Iron and steel: All of the employees in one plant received an increase of 14 per cent. Twenty-nine establishments granted a 10 per cent increase; in 11 of these all employees were affected; in 8, practically all; in 1, 90 per cent; in another, 75 per cent; in 2, 66 $\frac{2}{3}$ per cent; and in the remaining 6, 65 per cent, 60 per cent, about 60 per cent, 50 per cent, 3 per cent, and all the day men, respectively. An increase of approximately 10 per cent was reported by three mills, affecting all the employees in one concern, about 96 per cent of the force in the second firm, and 90 per cent of the men in the third establishment. Another plant reported a 10 per cent increase but made no further statement. One plant changed the bonus from 55 to 65 per cent. One concern granted increases ranging from 7 to 10 per cent, to 70 per cent of the employees. All of the employees in one establishment were given an increase of 9 $\frac{1}{2}$ per cent, while all the men in another mill were granted a 9 per cent increase. An increase of 8.9 per cent, affecting 90.3 per cent of the force, was reported by one concern. Three establishments gave an 8 per cent increase, affecting all the men in two concerns, and 50 per cent of the employees in the third mill. All of the force in one plant were given an increase of 6.9 per cent, and the entire force of another firm were granted a 5 per cent increase. Six firms reported an increase of 2.3 per cent but made no further statement. An increase of 2 per cent, affecting 10.8 per cent of the employees, was reported by one plant.

Leather manufacturing: One establishment gave an increase of 15 per cent to 25 per cent of the employees, and one-third of the men in another plant received a 11 $\frac{1}{2}$ per cent increase. Practically all the men in one concern were given an increase of approximately 7 $\frac{1}{2}$ per cent.

Paper making: One establishment gave a 10 per cent increase to all of the employees and another firm reported an increase of 10 per cent but failed to state the number of persons affected. Two mills granted an increase of approximately 10 per cent, affecting all the employees in one plant and 75 per cent of the force in the other. One concern gave increases ranging from 4 to 10 per cent to the entire force. An increase of 8 per cent, affecting 13.4 per cent of the men, was reported by one mill. Approximately 40 per cent of the employees in another establishment received an increase of 6 per cent, while 17.7 per cent of the employees in another plant received an increase of 5.8 per cent. One concern reported an increase to all the force but did not state the amount of the increase, while another plant reported a general advance in wages but made no further statement.

Silk: An increase of 20 per cent, affecting 50 per cent of the employees, was reported by one concern, while the entire force in

one establishment received an increase of about 17 per cent, and about 79 per cent of the employees in another mill were granted a 15 per cent increase. An increase of $12\frac{1}{2}$ per cent, affecting about 9 per cent of the men, was reported by one firm, while another concern gave a 12 per cent increase to 30 per cent of the force. Five establishments reported a 10 per cent increase, affecting all of the employees in two mills, 60 per cent of the men in another plant, 50 per cent of the employees of the fourth firm, and 20 per cent of the force in the fifth concern. Ninety per cent of the force in one establishment were given a wage increase of about 10 per cent. One concern reported an increase of 8 per cent, affecting 40 per cent of the employees, while another plant reported a 6 per cent increase, affecting 45 per cent of the employees. Twenty per cent of the men in one mill were given a 5 per cent increase. All of the men in one mill received an increase of \$2 a week and all the women an increase of \$1 a week. One establishment gave the weavers, or about 60 per cent of the force, an increase of 5 cents per hour.

Finding Employment for Disabled Civilians in the United States.

By GERTRUDE R. STEIN.¹

THE Institute for Crippled and Disabled Men, 101 East Twenty-third Street, New York City, formerly the Red Cross Institute, has recently compiled tables to show what jobs men with certain disabilities have secured through its bureau. Most of the claims made as to the working ability of crippled men have been speculative. The institute now has records of about 2,200 cases of men and boys suffering from orthopedic difficulties. There is a great deal of statistical information in these records which might be of use to others undertaking work with disabled civilians. The institute is anxious to make these facts of use to any organization interested, and welcomes inquiries.

The institute secured 1,800 positions for crippled men and boys during its first two years. It does not maintain a general bureau for the handicapped, but studies opportunities for orthopedic cases only. The institute realized early in its history that the orthopedic cases were only a small part of the general problem. It felt, however, that in as technical and experimental a subject as this it was better to try to do a small job thoroughly rather than to attempt to cover the whole field superficially.

¹ Employment secretary, Institute for Crippled and Disabled Men.

When the institute started its employment bureau the secretaries found difficulty in persuading employers to take disabled men. The whole idea of having crippled workmen was a new one to many. Even some of the workmen were surprised that the world expected them to "carry on" again. Applicants came to the bureau who had not worked in 10 or 15 years. Their friends and relatives had treated them as though there was no possibility of their ever again being among the employed. It has been very gratifying, as the bureau has progressed, to see the increasing variety of positions open to the handicapped, and the increasing number of cripples who have started out for a second time on their industrial careers.

In placement work for the handicapped it is difficult to lay down rules. For one cripple it is essential that he get work near home. He may secure congenial and a very good paying position, but if it is necessary for him to travel by subway he will be irregular and unpunctual. A man with spinal trouble frequently can stand or sit at work, but these postures must be varied. If he keeps in one position for any length of time the pain becomes excessive. Another man is so foreign that he can not work in a factory where the foreman is not of his nationality. There are many other complicating circumstances, such as hours, sanitary conditions, wages, etc. In placing cripples we have all the difficulties of the placement of the normal man plus many others.

The fact that the institute has placed 1,800 men is not so encouraging as it appears. There are many errors in these placements. Some of these men would have received more satisfactory positions if the secretaries had possessed the information they have since obtained. We are only in the very beginning of this science of rehabilitation. We have much to learn, and, unfortunately for those with whom we work, we have to learn through our errors.

One result of this survey is the discovery of how few men with arm amputations (only 165) have been placed. Many of these placements have unfortunately not been constructive. This has certainly been the hardest task the institute has had before it. A one-armed man can not place himself without almost superhuman effort. Although the institute bureau has concentrated its greatest efforts on this problem of the arm case the results have not been large. A few very constructive placements however, were made, such as those of painter, welder, insurance investigator, milling machine tender, electrical engineer, nickel plater, etc. The bureau is always on the search for jobs for which men with arm disabilities can be trained.

*Occupations of Disabled Civilians.**Right arm amputated (84 men).*

Building maintenance:	Number.	Trade workers:	Number.
Door man.....	4	Button sorter.....	1
Elevator operator.....	7	Machine tender.....	2
Fireman.....	1	Novelties.....	1
Porter.....	7	Rubber sorter.....	1
Switchboard operator.....	3	Toys.....	1
Watchman.....	11	Varnisher, painter, etc.....	5
Clerical work:		Welder.....	2
Checker.....	1	Woodworker.....	1
Clerk.....	7	Miscellaneous:	
Stock clerk.....	2	Machine tender.....	1
Technical workers:		Messenger.....	20
Draftsman.....	4	News stand.....	2

Left arm amputated (80 men).

Building maintenance:	Number		Number.
Door man.....	2	Professional and technical—Concl'd.	
Elevator operator.....	5	Insurance inspector.....	1
Handy man.....	1	Recreation director.....	1
Laborer.....	1	Social worker.....	1
Porter.....	5	Trade worker:	
Relief man, subway.....	1	Buttons.....	2
Stable man.....	1	Metal.....	3
Switchboard operator.....	4	Nickel plater.....	1
Watchman.....	10	Packer.....	1
Clerical work:		Painting.....	4
Office boy.....	1	Pencils (milling, drilling, etc.)..	3
Salesman or collector.....	3	Polishers, metal.....	2
Professional and technical:		Welder.....	1
Building inspector.....	1	Miscellaneous:	
Draftsman.....	3	Messenger.....	21
Electrical engineer.....	1		

One arm partially disabled (217 men).²

Building maintenance:	Number.	Clerical workers:	Number.
Caretaker.....	1	Cashier.....	2
Door man.....	5	Charge of records.....	1
Elevator operator.....	22	Checker.....	1
Fireman, assistant.....	1	Clerk.....	11
Gateman.....	1	Errand boy.....	4
Handy man.....	3	Office boy.....	1
House man.....	3	Post-office clerk.....	1
Porter.....	25	Salesman.....	1
Sweeper.....	1	Shipping clerk.....	2
Switchboard operator.....	1	Stock and time clerk.....	2
Watchman.....	26	Technical:	
Window cleaner.....	1	Lithographer.....	2
Yardman.....	1	Draftsman.....	1

² Including paralysis, fractures, finger amputations, deformed arms, etc.

Trade workers:	Number.	Trade workers—Concluded.	Number.
Addressing.....	1	Painter.....	1
Biscuit factory.....	1	Paint factory.....	2
Button factory.....	1	Pasting clippings.....	1
Cabinet worker.....	1	Pencil factory.....	3
Chemical factory.....	1	Piano factory.....	3
Drill press.....	2	Repairing vacuums.....	1
Dye factory.....	1	Shoe factory.....	1
Electric specialties.....	1	Toy factory.....	4
Film inspector.....	5	Wicker furniture (learner).....	1
Furniture (boring machine).....	1	Wire machine.....	1
Glass lapping.....	1	Woodworker.....	3
Machine shop.....	2	Miscellaneous:	
Machine welding.....	10	Car cleaner (taxi).....	1
Mattress factory.....	1	Chauffeur.....	1
Millinery factory.....	1	Farm laborer.....	1
Motion-picture operator.....	2	Guard duty.....	3
Novelty factory.....	2	Kitchen man.....	5
Operator, ladies' waists.....	1	Laborer.....	1
Optical (learner).....	1	Messenger.....	26
Packer.....	1	Trucking.....	1

Both legs amputated or paralyzed (84 men).

Building maintenance:	Number.	Other trade work:	Number.
Elevator operator.....	6	Auto governor.....	1
Switchboard operator.....	3	Bindery.....	1
Clerical and technical:		Buttons.....	2
Cashier.....	1	Dolls.....	2
Checker.....	1	Electrical specialties.....	4
Clerical.....	2	Film inspector.....	1
Draftsman.....	2	Fire extinguisher.....	2
Stenographer.....	3	Flags.....	2
Typist.....	1	Fountain pens.....	8
Jewelry, etc.:		Furrier.....	1
Gilding.....	1	Gold pens.....	1
Silversmith (learner).....	1	Hardware polishing.....	1
Stone setter.....	1	Jewelry cases.....	1
Watch repairing.....	1	Mechanic.....	1
Metals and machinery:		Novelties.....	4
Metals.....	3	Paper fasteners.....	1
Soldering.....	3	Press clippings.....	5
Woodworking and furniture:		Rubber.....	1
Air-brush worker.....	2	Thermometers.....	2
Mirror polishing.....	1	Tools.....	1
Piano actions.....	3	Toys.....	3
Wicker furniture.....	1	Typewriter assembling.....	1
Woodworking.....	1	Whistles.....	1

One leg amputated (368 men).

Building maintenance:	Number.	Building maintenance—Con.	Number.
Domestic.....	1	Gateman.....	1
Door man.....	1	House man.....	1
Elevators.....	21	Kitchen man.....	2
Fireman.....	2	Night man.....	1

Building maintenance—Concl'd. Number.		Trade work—Concluded. Number.	
Pantry helper.....	1	Foot press.....	1
Switchboard operator.....	9	Fountain pens.....	14
Watchman.....	4	Gas iron.....	1
Clerical, professional, and technical:		Gold pens.....	1
Addresser.....	2	Handkerchiefs (cutting).....	1
Bookkeeper.....	2	Hospital supplies (bench).....	1
Caretaker, truant school.....	1	Kitchen utensils (bench).....	2
Checker.....	1	Lace and nettings.....	1
Clerk.....	13	Lacquering switchboard.....	2
Draftsman.....	2	Lamps.....	1
Engraver.....	3	Lapidary.....	1
Filing clerk.....	1	Leather (punching).....	3
Hotel clerk.....	2	Light factory.....	1
Information clerk.....	1	Machinist.....	11
Night clerk.....	2	Mechanic's helper.....	1
Post-office clerk.....	2	Millinery.....	4
Shipping clerk.....	4	Motor brushes.....	1
Stenographer.....	1	Novelties.....	10
Stock clerk.....	2	Nuts (shelling).....	1
Time keeper.....	2	Packer, department store.....	2
Trade work:		Paper.....	2
Air brush.....	1	Pasting clippings.....	6
Ammunition.....	1	Patterns (machinist).....	1
Artificial limbs.....	10	Pencils.....	2
Auto governors.....	1	Pianos (assembling).....	16
Automobiles.....	1	Picture frames (painting).....	3
Auto radiators.....	2	Polishing hardware.....	8
Batteries.....	1	Post cards.....	2
Bindery.....	1	Printing machine.....	2
Book covers.....	2	Shoes.....	5
Braids.....	1	Solderer.....	1
Brass.....	3	Surgical.....	1
Brushes.....	15	Talking machines.....	1
Buttons.....	17	Thermometers.....	1
Cabinet maker.....	1	Toys.....	8
Candy.....	4	Typewriters.....	2
Cans (soldering).....	1	Typewriter repairer.....	3
Celluloid (buffer).....	1	Watches (learners).....	2
Cigar rolling.....	1	Welding.....	26
Clothing.....	1	Whistles.....	1
Combs.....	4	Willow work.....	1
Crating furniture.....	1	Wire factory.....	3
Dictograph assembling.....	1	Woodworking.....	1
Dies, lathe.....	1	Miscellaneous:	
Dolls.....	4	Chauffeur, department store.....	1
Drill press.....	4	Drivers.....	2
Electrical specialties.....	14	Farm.....	1
Expansion bolt (emery wheel).....	2	Film inspector.....	8
Feathers.....	1	Locksmith.....	1
Filling cans.....	1	Plumber's assistant.....	1
Fire extinguishers.....	8	Salesman.....	2
Flags.....	1	Waiter.....	1
Flowers (varnishing).....	1		

Paralysis of right or left side (90 men).

Building maintenance:	Number.	Trade work—Concluded.	Number.
Domestic.....	1	Buttons.....	1
Door man.....	2	Dolls.....	1
Elevator operator.....	14	Drill press.....	1
Kitchen man.....	1	Electric novelties.....	1
Porter.....	6	Film inspector.....	4
Switchboard operator.....	4	Gold pens.....	2
Watchman.....	5	Metal worker.....	4
Clerical and technical:		Painting flowers.....	1
Assistant shipping clerk.....	1	Painting furniture.....	3
Clerk.....	5	Pencils.....	1
Draftsman, maps.....	1	Polishing hardware.....	2
Electrical inspector.....	1	Toys.....	2
Index room clerk.....	1	Woodworker.....	3
Information clerk.....	1	Miscellaneous:	
Salesman.....	1	Delivery man.....	1
Time clerk.....	1	Embroiderer.....	1
Trade work:		Messenger.....	14
Blue prints.....	1	News stand.....	2
Bookbinder.....	1	Ticket agent.....	1

Spinal injuries and Potts disease (84 men).

Building maintenance:	Number.	Trade work—Concluded:	Number.
Door man.....	1	Film inspector.....	3
Elevator operator.....	3	Fire extinguishers.....	5
Floor man.....	1	Flags.....	1
Gate keeper.....	1	Fountain pens.....	8
Hall man.....	1	Gilding.....	1
Kitchen man.....	1	Glass blower (learner).....	1
Switchboard operator.....	1	Hardware.....	1
Watchman.....	3	Jeweler (learner).....	1
Clerical and technical:		Leather.....	2
Addressing clerk.....	1	Machinist.....	2
Clerk.....	4	Metal.....	4
Draftsman.....	2	Motion-picture operator.....	1
Errand clerk.....	1	Nut cracker.....	1
Receiving clerk.....	1	Pianos.....	2
Shipping clerk.....	3	Post cards.....	1
Trade work:		Shoes.....	4
Brass (helper).....	1	Solderer.....	1
Brushes.....	2	Talking machines.....	1
Clippings.....	6	Type.....	1
Electric batteries.....	1	Woodworking.....	1
Electric irons (repairer).....	1	Miscellaneous:	
Electric specialties.....	5	Messenger.....	1
Factory.....	1		

Locomotor ataxia (14 men).

Building maintenance:	Number.	Trade work:	Number.
Gateman.....	1	Buttons.....	2
Clerical:		Dolls (painting).....	1
Adding-machine operator.....	1	Factory.....	1
Cashier.....	1	Fountain pens.....	1
Night clerk.....	1	Pianos.....	1
Salesman.....	1	Polishing metal.....	1
		Power press (hair wavers).....	1
		Typewriter repair.....	1

Hernia (19 men).

Building maintenance:	Number.	Trade work:	Number.
Door man.....	1	Hardware.....	1
Elevator operator.....	6	Paper fasteners.....	1
Engineer, apartment.....	1	Miscellaneous:	
Engineer, wire works.....	1	Candy stand.....	1
Porter.....	3	Messenger.....	2
Clerical:			
Errands.....	1		
Route clerk.....	1		

Lameness (774 men and boys).

Building maintenance:	Number.	Clerical, etc.—Concluded.	Number.
Assistant janitor.....	3	Index clerk.....	1
Coal passer.....	1	Night clerk.....	9
Domestic.....	1	Receiving clerk.....	1
Door man.....	7	Shipping clerk.....	6
Elevator operator.....	73	Stock clerk.....	5
Engineer, apartment.....	2	Timekeeper.....	3
Gateman.....	1	Typist.....	1
Guard.....	1	Electric specialties:	
Handy man.....	1	Batteries.....	1
House man.....	5	Electric repairer (vacuums).....	2
Kitchen assistant.....	12	Electric specialties.....	41
Porter.....	30	Flash-lights.....	1
Telephone operator.....	17	Wiring fixtures.....	5
Usher.....	1	Jewelry and watches:	
Waiter.....	1	Optician (learner).....	1
Watchman.....	30	Polisher and learner.....	15
Clerical, etc.:		Watch repairer.....	4
Addressograph.....	2	Metal and machinery:	
Billing clerk.....	2	Assembling.....	3
Bookkeeper and stenographer.....	6	Bench work.....	4
Cashier.....	12	Drill press.....	6
Charge of office.....	5	Foot press.....	8
Checker.....	6	Grinder.....	2
Clerk.....	21	Inspector.....	2
Draftsman.....	3	Machinist.....	16
Errand boy.....	1	Metal worker.....	18
Filing clerk.....	1	Motor repairer.....	2
Hotel clerk.....	10	Polisher.....	1

Metal and machinery—Concl'd.	Number.	Other trade work—Concluded.	Number.
Solderer.....	8	Laundry folder.....	2
Surgical instruments.....	1	Lead.....	1
Tinsmith.....	1	Leather belts.....	8
Tool-room clerk.....	1	Magnetos (assembling).....	2
Welder.....	17	Mattresses.....	2
Woodworking and furniture:		Millinery.....	1
Air brush work.....	2	Mitts.....	2
Artificial-limb maker.....	4	Multicolor.....	1
Picture frames.....	2	Nickel plating (buffing).....	1
Scraping varnish.....	1	Novelties.....	14
Woodworking.....	6	Packer.....	11
Other trade work:		Paint manufacturing.....	1
Airplanes.....	1	Paper boxes.....	2
Auto governors.....	4	Pattern making (bronze).....	1
Baking powder.....	1	Pencils.....	8
Ball bearing.....	1	Perfumes.....	1
Bindery.....	1	Pianos (bench work).....	20
Bird cages.....	2	Pillows.....	1
Brush factory.....	20	Plate washing (engraving).....	2
Button factory.....	12	Pocketbooks.....	1
Chain manufacturing.....	1	Polishers, hardware.....	8
Changeable signs (assembling).....	1	Printing (feeder).....	1
Clipping bureau.....	13	Razor blades.....	1
Combs.....	2	Shoe lasts.....	5
Cord and tassels.....	1	Stenciling post cards.....	1
Cork manufacturing.....	1	Tailor.....	1
Doll factory.....	5	Thermometers.....	3
Dress forms.....	1	Toy factory.....	12
Film examiner.....	9	Type manufacturing.....	1
Fire extinguishers.....	14	Typewriter factory.....	11
Flags.....	1	Umbrella handles.....	5
Flowers.....	1	Whistles.....	1
Flowers (painting).....	3	Wire work (florists').....	1
Fountain pens.....	51	Miscellaneous:	
Furs.....	1	Chauffeur.....	1
Gas masks.....	1	Driver.....	9
Glass lappers.....	2	Gardener.....	1
Hardware.....	1	Messenger.....	9
Indexes.....	1	Salesman.....	1
Lace (assorting).....	3	Soda fountain clerk.....	1
Lamp factory.....	6	Ticket agent.....	2

Reabsorption of Labor and Unemployment in the United Kingdom.¹

Compiled by N. C. ADAMS.

THE total number of men demobilized from the forces in the United Kingdom as of February 18, 1920, was 4,187,709, of which number 197,713 were officers and 3,989,996 were of other ranks. On the same date 102,147 women had been demobilized from the several women's auxiliary branches of the service. Presumably all women in these branches of the service will be demobilized, in which case some 5,000 are yet to be released.

TABLE 1.—DEMOBILIZATION OF HIS MAJESTY'S FORCES, BY SERVICE AND RANK, UP TO FEBRUARY 18, 1920.

Service and rank.	Strength at signing of armistice. ¹	Numbers to be demobilized. ²	Numbers demobilized or discharged up to Feb. 18, 1920.
Royal Navy:			
Officers.....	37, 196	21, 719	24, 328
Other ranks.....	375, 973	171, 814	247, 804
Army:			
Officers.....	167, 118	114, 600	147, 209
Other ranks.....	3, 816, 242	2, 373, 284	* 3, 499, 346
Royal Air Force:			
Officers.....	29, 696	20, 218	26, 176
Other ranks.....	276, 809	180, 721	242, 846
Total:			
Officers.....	234, 010	156, 537	197, 713
Other ranks.....	4, 469, 024	2, 725, 819	3, 989, 996

¹ Plus subsequent additions.
² Original expectations.

³ In addition about 150,000 are still to be demobilized.

There was a continuous week-to-week reduction in unemployment in the United Kingdom from the beginning of May, 1919, up to the last of September, when the railway strike took place and the long-drawn-out molders' strike began.

The total number of persons on the live registers of employment exchanges April 25, 1919, was 1,257,160, which number had decreased to 530,336 on September 19, but up to the end of January, 1920, the total had not again been so low, while twice during the period the weekly live register totals exceeded 600,000. Following the molders' strike settlement, January 22, 1920, the week-to-week reduction was resumed, and February 6, 1920, the September 19, 1919, total was lowered for the first time. On February 13 the total had fallen below a half million, the figures being 493,273.²

¹ Unless otherwise indicated, the figures used in this article are copied from the weekly reports on demobilization and resettlement prepared under the direction of the Controller of Statistics of the British Ministry of Labor.

For previous reports see MONTHLY LABOR REVIEW for May, 1919, pp. 85 to 100, and September, 1919, pp. 135 to 161.

² On Mar. 5, 1920, the total had fallen to 425,157.

To illustrate the amount of unemployment caused by the iron molding and core making trades' strike the Weekly Report for November 25, 1919, says: "After more than nine weeks' duration the number on strike is between 40,000 and 50,000. The number of men and boys with policies lodged in shipbuilding, engineering, and iron and steel trades is 118,794, or an increase of nearly 50,000 over the figures of September 19, the donation week preceding the strike." This strike was settled on January 22, 1920, and work was resumed four days later. The strike had lasted more than four months, and it is estimated that at some time during that period 100,000 in allied trades were thrown out of employment, in addition to the 50,000 on strike.³

The out-of-work donation scheme under which benefits were payable to those demobilized from the forces for a period of 26 weeks was, in May, 1919, extended for a second period of 26 weeks, and, again, in November, 1919, a further extension was made under modified terms for the period ending March 31, 1920.⁴

The highest point in civilian unemployment was reached on March 7, 1919, when 790,519 policies were lodged. From that date the number rapidly fell to 100,730 on September 26, and the reduction would doubtless have continued but for the combined effect of the railway strike and the iron molders' dispute. The scrutiny by employment committees had resulted in the refusal of 40,700 original civilian policies, 70,400 extended policies to November 21, nearly 70 per cent of these refusals being in respect of women. It should also be noted that more than 53,000 men and women had exhausted the full extended period of donation.

Reabsorption—His Majesty's Forces.

THE resettlement reports of the Ministry of Labor are now presenting reabsorption statistics for ex-service men on the basis of the difference between the number demobilized whose furlough has expired and the number drawing unemployment benefit. "This method gives a more accurate figure than the method formerly used⁵ but is still an understatement of reabsorption in view of the fact that the men discharged prior to the armistice who have been issued with His Majesty's Forces policies are omitted from the total available for donation, their number being at present not ascertainable, though policies lodged by such men are included." The reabsorption of women is still calculated only for those women to whom policies have been issued, a number less than 20 per cent of the total demobi-

³ The molders finally accepted a 5s. (\$1.22, par) increase in place of the 15s. (\$3.65, par) demanded, on the understanding that a joint inquiry into working conditions of the trade would be held forthwith.

⁴ See MONTHLY LABOR REVIEW, February, 1920, pp. 228, 229.

⁵ See MONTHLY LABOR REVIEW, September, 1919, pp. 136-138.

lized. A large proportion of the remaining 80 per cent either are not customarily employed or are trained workers such as nurses, motor drivers, etc., who have little or no difficulty in placing themselves.

The original plan to demobilize by industries and in accordance with industrial needs was not strictly followed, and after September 30 the publication of the analysis of the dispersal certificates by industrial groups was discontinued, as it was found by investigation to be unsafe to assume that all demobilized men had returned to the industries in which they were grouped under the army classification.

Table 2 shows the progress of the reabsorption in industry of demobilized members of the Forces, both men and women. It will be seen that only 8.9 per cent of the demobilized men whose furlough had expired were without employment February 6, 1920, while 21.9 per cent of the demobilized women to whom policies had been issued were still unemployed.

TABLE 2.—PROGRESS OF REABSORPTION OF HIS MAJESTY'S FORCES INTO INDUSTRY.

Date.	Demobilized men.						Total.
	On furlough.	Furlough expired.				Total.	
		Unemployed.		Reabsorbed in industry.			
		Number.	Per cent.	Number.	Per cent.		
1919.							
Jan. 17.....	342,053	40,400	18.7	175,855	81.3	216,255	558,308
Feb. 7.....	842,155	63,277	15.4	347,161	84.6	410,438	1,252,593
Mar. 7.....	740,520	200,686	16.0	1,051,907	84.0	1,252,593	1,993,113
Apr. 4.....	330,908	336,570	16.9	1,656,543	83.1	1,993,113	2,324,021
May 2.....	267,513	402,151	17.3	1,921,870	82.7	2,324,021	2,501,534
June 6.....	156,121	383,570	14.4	2,276,930	85.6	2,660,500	2,816,621
July 4.....	143,241	363,926	12.9	2,452,695	87.1	2,816,621	2,959,862
Aug. 1.....	92,495	264,570	12.3	2,595,292	87.7	2,959,862	3,052,357
Sept. 5.....	134,692	324,786	10.5	2,746,973	89.5	3,071,759	3,206,451
Sept. 16.....	204,104	300,251	9.5	2,847,361	90.5	3,147,613	3,351,716
Oct. 3 and 10.....	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Oct. 17.....	216,602	334,616	10.2	2,959,125	89.8	3,293,741	3,447,343
Nov. 7.....	226,232	336,523	9.9	3,054,662	90.1	3,391,185	3,617,417
Nov. 14.....	205,446	342,000	9.9	3,105,343	90.0	3,447,343	3,652,789
Nov. 21.....	190,168	348,955	9.9	3,155,958	90.0	3,504,913	3,695,081
Nov. 28.....	173,811	353,868	9.9	3,192,200	90.1	3,545,868	3,719,679
Dec. 5.....	137,070	344,741	9.6	3,257,480	90.4	3,602,221	3,739,291
Dec. 12.....	107,397	356,069	9.7	3,296,720	90.3	3,652,789	3,760,186
Dec. 19.....	80,762	365,435	9.9	3,329,646	90.1	3,695,081	3,775,843
Dec. 26.....	(2)	(2)	(2)	(2)	(2)	(2)	(2)
1920.							
Jan. 2.....	63,459	377,957	10.1	3,361,334	89.9	3,739,291	3,802,750
Jan. 9.....	53,626	388,139	10.3	3,372,047	89.7	3,760,186	3,813,812
Jan. 16.....	49,850	391,422	10.3	3,384,421	89.7	3,775,843	3,825,693
Jan. 23.....	43,842	380,293	10.1	3,409,863	89.9	3,790,156	3,833,998
Jan. 30.....	37,602	372,173	9.8	3,430,577	90.2	3,802,750	3,840,352
Feb. 6.....	37,163	339,294	8.9	3,486,935	91.1	3,826,229	3,863,392
Feb. 13.....		323,725					
Feb. 20.....		306,284					

¹ No report owing to railway strike.

² No report; next report covers 2 weeks.

TABLE 2.—PROGRESS OF REABSORPTION OF HIS MAJESTY'S FORCES INTO INDUSTRY—Concluded.

Date.	Demobilized women.					Total reabsorbed in industry.	
	Policies issued.	Policies lodged.	Per cent unemployed.	Reabsorbed in industry.		Number.	Per cent.
				Number.	Per cent.		
1919.							
Jan. 17.....	1,595	131	8.2	1,464	91.8	177,319	81.9
Feb. 7.....	2,236	380	17.0	1,856	83.0	349,017	84.0
Mar. 7.....	2,992	1,025	34.1	1,967	65.9	1,053,874	83.9
Apr. 4.....	3,877	961	24.8	2,916	75.2	1,659,359	83.0
May 2.....	5,325	1,316	24.7	4,009	75.3	1,925,879	82.3
June 6.....	6,584	2,082	31.6	4,502	68.4	2,281,432	85.6
July 4.....	7,304	2,271	31.1	5,033	68.9	2,457,728	86.0
Aug. 1.....	8,070	2,101	26.0	5,969	74.0	2,601,261	87.6
Sept. 5.....	8,794	1,965	22.4	6,829	77.6	2,753,802	89.3
Sept. 26.....	9,442	2,021	21.4	7,421	78.6	2,854,782	90.5
Oct. 3 and 10.....	(3)	(3)	(3)	(3)	(3)	(3)	(3)
Oct. 17.....	11,029	3,332	30.2	7,697	59.8	2,966,822	89.9
Nov. 7.....	12,903	4,164	32.2	8,739	67.8	3,063,401	90.0
Nov. 14.....	13,482	4,591	34.0	8,891	66.0	3,114,234	90.0
Nov. 21.....	14,079	4,954	35.2	9,125	64.8	3,165,083	90.0
Nov. 28.....	17,057	5,155	30.2	11,902	69.8	3,204,102	89.9
Dec. 5.....	17,935	5,303	29.5	12,632	70.5	3,270,112	90.3
Dec. 12.....	18,563	5,566	29.9	12,997	70.1	3,309,697	90.4
Dec. 19.....	19,475	5,245	27.0	14,230	73.0	3,343,876	90.0
Dec. 26.....	(4)	(4)	(4)	(4)	(4)	(4)	(4)
1920.							
Jan. 2.....	20,484	5,138	25.0	15,346	75.0	3,376,680	89.8
Jan. 9.....	20,875	5,007	24.0	15,868	76.0	3,387,915	89.6
Jan. 16.....	21,181	5,073	23.9	16,108	76.1	3,400,529	89.6
Jan. 23.....	21,497	5,072	23.6	16,425	76.4	3,426,288	89.8
Jan. 30.....	21,746	4,943	22.7	16,803	77.3	3,447,380	90.1
Feb. 6.....	21,955	4,800	21.9	17,155	78.1	3,504,090	91.0
Feb. 13.....		4,548					
Feb. 20.....		4,314					

^a No report owing to railway strike.^a No report; next report covers 2 weeks.

Reabsorption—Civilians.

TABLE 3 shows for civilians the cumulative number of policies issued, the number remaining lodged at specific dates, and the number of unemployed persons reabsorbed into industry as indicated by the difference between policies issued and policies lodged at a given date.

The publication of these statistics was not resumed after the interruption caused by the strikes which focused in September, at which time 95 per cent of the unemployed civilians had been reabsorbed into industry.

TABLE 3.—PROGRESS OF REABSORPTION OF CIVILIANS INTO INDUSTRY IN GREAT BRITAIN.

Date.	Men.				Women.				Boys.				Girls.				Total civilians reabsorbed.
	Policies issued.	Policies lodged.	Per cent un-employ- ed.	Per cent reab- sorbed.	Policies issued.	Policies lodged.	Per cent un-employ- ed.	Per cent reab- sorbed.	Policies issued.	Policies lodged.	Per cent un-employ- ed.	Per cent reab- sorbed.	Policies issued.	Policies lodged.	Per cent un-employ- ed.	Per cent reab- sorbed.	
1919.																	
Jan. 10...	179,991	102,500	57.0	77.491	43.0	364,736	249,926	68.8	114,810	31.4	27,732	15,773	56.8	11,979	43.2	28,866	216,312
Feb. 7...	294,556	156,685	53.2	137.871	46.8	552,835	404,081	73.1	148,754	26.9	48,091	22,632	47.1	25,459	52.9	47,792	334,615
Mar. 7...	391,586	194,915	49.8	196.477	50.2	699,901	469,089	67.1	230,812	32.9	66,369	25,151	37.9	41,218	62.1	60,862	496,513
Apr. 4...	483,387	201,188	41.6	282.199	58.4	846,603	461,363	54.5	385,541	45.5	85,541	25,845	30.2	59,696	69.8	75,844	773,222
May 2...	558,753	199,223	35.7	359.530	64.3	960,263	414,135	43.2	546,128	54.8	88,767	22,704	23.0	76,063	77.0	88,789	901,041
June 6...	621,675	122,900	19.8	498.775	80.2	1,030,811	164,090	15.9	866,811	84.1	107,642	10,173	9.5	97,469	90.5	97,202	1,041,810
July 4...	633,339	91,880	14.0	561.359	86.0	1,038,524	93,559	8.8	964,965	91.2	111,242	5,714	5.1	105,528	94.9	100,883	1,150,714
July 11...	661,100	88,092	13.3	573.008	86.7	1,064,931	83,345	8.0	979,606	92.0	112,176	5,201	4.6	106,975	93.4	101,693	1,277,043
July 18...	697,776	84,831	12.7	582.945	87.3	1,069,890	77,986	7.3	997,904	92.7	112,884	4,816	4.3	108,068	93.7	102,350	1,395,346
July 25...	678,665	86,872	12.8	591.793	87.2	1,074,496	67,822	6.3	1,006,674	93.7	114,453	5,068	4.4	109,385	95.0	103,014	1,505,878
Aug. 1...	692,992	93,840	13.5	599.152	86.5	1,086,819	68,351	6.3	1,018,468	93.7	116,716	6,409	5.5	110,307	94.5	105,138	1,627,224
Aug. 8...	703,884	92,522	13.1	611.312	86.9	1,093,339	57,917	5.3	1,035,422	94.7	118,221	6,115	5.3	112,106	94.7	106,404	1,741,869
Aug. 15...	702,662	89,858	12.6	622.804	87.4	1,099,913	50,043	5.0	1,043,870	95.0	119,693	6,543	5.5	113,110	94.9	107,638	1,861,636
Aug. 22...	720,429	87,710	12.4	632.719	87.6	1,105,232	44,735	4.6	1,054,377	95.4	120,695	6,178	5.1	114,517	94.9	108,380	1,995,052
Aug. 29...	726,115	78,755	10.7	647.360	89.3	1,108,436	40,858	4.1	1,063,698	95.9	121,240	4,916	4.0	116,324	96.0	108,745	2,122,283
Sept. 5...	732,447	67,936	9.3	664.511	90.7	1,111,686	36,612	3.3	1,073,054	96.7	121,916	3,931	3.2	117,985	96.8	109,194	2,241,009
Sept. 12...	738,350	62,751	8.5	673.599	91.5	1,114,514	32,541	2.9	1,081,973	97.1	122,367	3,194	2.6	119,073	97.4	109,443	2,363,793

According to the final published report 1,983,793, or 95 per cent of all unemployed civilians in Great Britain to whom unemployment donation policies had been issued from November 25, 1918, to September 12, 1919, had been reabsorbed into industry. Of this number 675,599 were men, 1,081,973 were women, 119,073 were boys, and 107,148 were girls. The highest percentage of unemployment was among men -8.5 per cent; among women, boys, and girls, 2.9, 2.6, and 2.1 per cent, respectively, were unemployed. During the period policies had been issued to 738,350 men, 1,114,514 women, 122,367 boys, and 109,445 girls—a total of 2,084,676.

The out-of-work donation scheme for civilian workers terminated on November 24; therefore the last full week for which figures for civilian out-of-work donation policies published is the week ending November 22.

At that date of the 137,637 civilians who were on donation 72,137 were in insured occupations, and of these latter about 70,000⁶ claimed unemployment insurance on the 28th of November. The total number of civilians claiming unemployment insurance on November 28, 1919, was 102,684.

The number of unemployment books remaining lodged under the 1911 and 1916 national insurance (unemployment) acts is shown by industries in Table 4, from the week following the termination of the out-of-work donation scheme to February 20, 1920.

The effect of the iron molders' strike is easily traced in this table in the steady increase of the figure for males in engineering and allied trades. When the strike terminated (Jan. 22, 1920) nearly 60 per cent more books were lodged for males (total, all insured trades) than at the end of November, while in the same period the number of women's books lodged had decreased over 15 per cent. Four weeks after the termination of the strike the number of men's books had decreased over 30 per cent, showing the very rapid resumption of employment. In the engineering and iron-founding trades alone (males) the decrease in unemployment was over 40 per cent. These figures, of course, relate to civilians only. The effect of this strike and its settlement upon ex-service men's unemployment is shown on pages 166 to 169.

⁶ These had already been insured under unemployment insurance acts of previous years. A new bill to establish general compulsory unemployment insurance was introduced in Parliament by the Minister of Labor on February 16, 1920.

TABLE 4.—NUMBER OF UNEMPLOYMENT BOOKS REMAINING LODGED AT ALL LOCAL OFFICES UNDER THE 1911 AND 1916 NATIONAL INSURANCE (UNEMPLOYMENT) ACTS.

Week ending—	Build- ing and works of con- struc- tion.	Ship- build- ing.	Engi- neer- ing and iron found- ing.	Con- struc- tion of vehi- cles.	Saw- mill- ing, pack- ing- case manu- factur- ing, etc.	Amu- ni- tion.	Chem- icals.	Iron, steel, and metal pro- duc- tion.	Metal manu- fac- ture.	Bricks, tiles, etc.	Other insur- ed indus- tries.	Total.
1919.												
Nov. 28:												
Males.....	13,067	7,658	34,842	2,357	865	2,331	890	1,776	1,818	185	2,105	67,894
Females.....	221	483	14,692	601	792	5,703	1,236	631	3,024	226	7,181	34,790
Total.....	13,288	8,141	49,534	2,958	1,657	8,034	2,126	2,407	4,842	411	9,286	102,684
Dec. 5:												
Males.....	14,894	7,353	42,154	3,925	1,069	2,609	980	2,233	1,977	216	2,503	79,913
Females.....	239	428	14,492	666	777	5,780	1,128	592	3,129	252	7,109	34,590
Total.....	15,133	7,781	56,646	4,591	1,846	8,389	2,106	2,825	5,106	468	9,612	114,503
Dec. 12:												
Males.....	16,477	7,654	43,968	4,013	1,094	2,497	951	1,879	2,155	209	2,588	83,485
Females.....	238	486	13,166	590	737	5,691	1,112	568	2,843	262	6,282	31,975
Total.....	16,715	8,140	57,134	4,603	1,831	8,188	2,063	2,447	4,998	471	8,870	115,460
Dec. 19:												
Males.....	17,043	7,745	46,487	4,125	1,158	2,540	1,121	1,939	2,176	238	2,729	87,301
Females.....	212	441	13,007	571	664	5,166	1,100	552	2,687	300	5,669	30,369
Total.....	17,255	8,186	59,494	4,696	1,822	7,706	2,221	2,491	4,863	538	8,398	117,670
Dec. 24:												
Males.....	17,733	8,115	51,855	4,176	1,191	2,627	1,180	2,515	2,245	225	2,943	94,805
Females.....	225	494	12,415	558	642	4,537	1,013	496	2,538	209	5,412	28,539
Total.....	17,958	8,609	64,270	4,734	1,833	7,164	2,193	3,011	4,783	434	8,355	123,344
1920.												
Jan. 2:												
Males.....	18,518	8,876	58,667	5,114	1,305	2,619	1,179	3,349	2,215	223	2,926	104,991
Females.....	223	436	12,025	573	660	4,507	1,177	485	2,524	242	5,156	28,308
Total.....	18,741	9,312	70,692	5,687	1,965	7,126	2,356	3,834	4,739	465	8,382	133,299
Jan. 9:												
Males.....	19,885	8,857	56,218	5,292	1,318	2,801	1,204	2,731	2,337	238	2,979	103,860
Females.....	195	460	11,965	542	739	4,761	1,069	475	2,738	250	5,551	28,745
Total.....	20,080	9,317	68,183	5,834	2,057	7,562	2,273	3,206	5,075	488	8,530	132,605
Jan. 16:												
Males.....	20,462	9,086	57,647	5,442	1,399	2,833	1,262	2,638	2,485	235	2,974	106,463
Females.....	205	439	12,071	543	632	4,753	1,094	482	2,849	260	5,445	28,773
Total.....	20,667	9,525	69,718	5,985	2,131	7,586	2,356	3,120	5,334	495	8,419	135,236
Jan. 23:												
Males.....	20,636	8,728	57,642	5,409	1,431	2,800	1,282	2,580	2,489	243	2,972	106,212
Females.....	207	428	12,271	535	778	4,806	1,083	506	2,925	272	5,613	29,424
Total.....	20,843	9,156	69,913	5,944	2,209	7,606	2,365	3,086	5,414	515	8,585	135,636
Jan. 30:												
Males.....	20,028	8,393	50,345	5,036	1,367	2,920	1,156	2,827	2,408	270	3,023	97,773
Females.....	219	436	12,607	515	768	4,719	1,033	536	2,863	282	5,735	29,703
Total.....	20,247	8,829	62,952	5,551	2,135	7,639	2,189	3,363	5,261	552	8,758	127,476
Feb. 6:												
Males.....	19,494	8,145	42,010	4,265	1,408	2,718	1,172	2,519	2,288	260	2,848	87,127
Females.....	245	450	12,886	480	761	4,756	943	587	2,825	265	5,474	29,665
Total.....	19,739	8,595	54,896	4,745	2,169	7,474	2,115	3,106	5,113	525	8,322	116,792
Feb. 13:												
Males.....	18,670	7,576	36,378	3,803	1,315	2,799	1,218	2,029	2,101	275	2,855	79,019
Females.....	207	418	12,626	484	771	4,642	864	633	2,808	269	5,403	29,125
Total.....	18,877	7,994	49,004	4,287	2,086	7,441	2,082	2,662	4,909	544	8,258	108,144
Feb. 20:												
Males.....	17,476	7,141	32,906	3,476	1,360	2,792	1,191	1,798	2,111	260	2,864	73,375
Females.....	214	434	12,905	509	775	4,683	874	653	2,712	257	5,434	29,450
Total.....	17,690	7,575	45,811	3,985	2,135	7,475	2,065	2,451	4,823	517	29,450	102,825

Action of Employment Committees with Regard to Civilian Policies.

THE week ending November 28 was also the last week for which there are reports of action taken on civilian out-of-work policies by employment committees, juvenile employment committees, and port labor committees. The total original applications (civilians only) dealt with to November 22 was 377,365, of which 10.8 per cent had been refused; and the total applications for extended donation (civilians only) was 154,412, of which 12.2 per cent had been refused. Table 5 shows the work of the committees specified for the last week that out-of-work donations were paid.

TABLE 5.—ACTION TAKEN ON CIVILIAN POLICIES BY EMPLOYMENT COMMITTEES, JUVENILE EMPLOYMENT COMMITTEES, AND PORT LABOR COMMITTEES FOR WEEK ENDING NOV. 22, 1919.

Item.	Men.	Boys.	Women.	Girls.	Total.
Applications for original policies:					
Applications granted.....	12,686	1,054	3,338	295	17,373
Applications refused.....	566	92	629	48	1,335
Total cases dealt with.....	13,252	1,146	3,967	343	18,708
Percentage of refusal.....	4.3	8.0	15.9	14.0	7.1
Application for extended policies:					
Applications granted.....	2,789	64	998	36	3,887
Applications refused.....	186	17	100	9	312
Total cases dealt with.....	2,975	81	1,098	45	4,199
Percentage of refusal.....	4.7	21.0	9.1	20.0	7.4

The reasons for refusal of applications are shown in Table 6.

TABLE 6.—NUMBER AND PER CENT OF ORIGINAL AND EXTENDED POLICIES REFUSED FOR SPECIFIED REASONS.

Reason for refusal.	Original policies refused.		Extended policies refused.	
	Number.	Per cent.	Number.	Per cent.
Not normally employed.....	338	25.3	40	12.8
Not genuinely seeking work.....	565	42.3	145	46.5
Not employed for 20 weeks in 1918.....	18	1.4		
Other reasons.....	414	31.0	127	40.7
Total.....	1,335	100.0	312	100.0

Action Taken on Out-of-Work Donation Policies.

THE volume of work of the appeals officers and courts of referees on out-of-work donation policies is shown in Table 7.

TABLE 7.—NUMBER (CUMULATIVE) AND DISPOSAL OF CASES REFERRED TO APPEALS OFFICERS AND COURTS OF REFEREES (GREAT BRITAIN ONLY).

Period ending—	Number of cases referred to appeals officers.	Number of cases—		
		Allowed by appeals officers.	Heard by courts of referees.	Outstanding.
1918.				
Dec. 12.....	4,400	833	970	2,597
1919.				
Jan. 2.....	12,622	2,067	5,768	4,529
Feb. 6.....	40,483	5,158	23,160	11,442
Mar. 6.....	74,509	7,710	53,042	12,892
Apr. 4.....	112,607	9,529	91,553	10,319
May 1.....	152,077	11,377	128,581	11,214
June 5.....	212,672	13,372	187,142	19,507
July 3.....	240,277	14,181	216,922	6,251
Aug. 7.....	272,500	15,488	247,628	6,093
Sept. 4.....	299,792	16,403	274,476	5,247
Oct. 3.....	324,108	17,176	296,969	5,918
Nov. 7.....	357,815	18,335	328,826	6,022
Dec. 5.....	378,709	18,960	350,989	3,556
1920.				
Jan. 2.....	390,134	19,274	362,790	2,585
Jan. 9.....	392,632	19,325	365,222	2,570
Jan. 16.....	395,850	19,378	367,936	2,954
Jan. 23.....	399,135	19,437	370,921	3,164
Jan. 30.....	402,182	19,487	374,045	3,002
Feb. 6.....	405,079	19,558	376,802	3,048
Feb. 13.....	407,051	19,601	378,730	2,938

Of the cases heard by courts of referees 365,674 have been analyzed, and of these 96,553 were allowed, 532 were compromised, and 268,589, or 73.5 per cent, disallowed. Table 8 shows the grounds for disallowance.

TABLE 8.—NUMBER AND PER CENT OF CLAIMS FOR OUT-OF-WORK DONATIONS DISALLOWED BY COURTS OF REFEREES, AND GROUNDS FOR DISALLOWANCE.

Grounds for disallowance.	Number.	Per cent.
Employment left voluntarily.....	78,730	29.3
Refusal to accept suitable employment.....	119,052	44.3
Dismissal for unsatisfactory conduct.....	37,789	14.0
Trade dispute.....	19,761	7.4
Other grounds.....	13,257	5.0
Total.....	268,589	100.0

Up to February 14, 1920, prosecutions for alleged fraud in connection with out-of-work donation had resulted as follows: Out of 1,251 prosecutions, 207 cases were dismissed, 734 individuals were fined, 222 imprisoned, and 88 admonished and bound over.

Duration of Unemployment.

SOME indication of the duration of unemployment is given in Tables 9 and 10 in which the policies lodged are analyzed according to the period for which payments were made, during the week ending November 22, 1919, for civilians (the last full week of their out-of-work donation) and the week ending February 20, 1920, for His Majesty's Forces.

TABLE 9. NUMBER OF CIVILIANS' POLICIES LODGED ON WHICH PAYMENTS FOR EACH CLASSIFIED PERIOD WERE MADE FOR THE WEEK ENDING NOV. 22, 1919.¹

Item.	Policies lodged but no payments made.	Original policies—1 to 78 days.	Extended policies.				Grand total.
			79 to 138 days.	139 to 155 days.	156 days.	Total.	
Men.....	7,967	74,838	13,832	2,749	934	17,515	100,320
Boys.....	595	7,160	244	21	9	274	8,000
Women.....	2,074	19,404	4,106	1,104	342	5,552	27,030
Girls.....	178	1,870	198	29	12	239	2,287
Total.....	10,785	103,272	18,380	3,903	1,297	23,580	137,637

TABLE 10.—NUMBER, AND PER CENT OF GRAND TOTAL, OF HIS MAJESTY'S FORCES, POLICIES LODGED ON WHICH PAYMENTS FOR EACH CLASSIFIED PERIOD WERE MADE FOR THE WEEK ENDING FEB. 20, 1920.¹

Item.	Policies lodged but no payments made.		Original policies—1 to 156 days.		Extended policies.							
					157 to 198 days.		199 to 234 days.		235 to 276 days.		Total.	
	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
Men.....	14,122	4.60	229,249	74.86	16,287	5.32	10,697	3.49	5,335	1.74	32,319	10.55
Women.....	222	5.14	4,001	92.75	56	1.30	15	.35	.....	.....	71	1.64
Total.....	14,344	4.62	233,250	75.10	16,343	5.26	10,712	3.45	5,335	1.71	32,390	10.42

Item.	Special extension period.								Grand total.	
	Policies lodged but no payments made.		1 to 53 days.		54 days.		Total.			
	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
Men.....	2,542	0.83	25,918	8.46	2,134	0.70	30,594	9.99	306,284	100
Women.....	3	.06	15	.35	2	.05	20	.46	4,314	100
Total	2,545	.82	25,933	8.35	2,136	.69	30,614	9.85	310,598	100

¹ These statements do not include figures for persons in part-time employment.

Short-Time Policies.

THE decline in the number of short-time policies was rapid up to the time of the railway strike at the end of September, the total number of civilians and His Majesty's Forces' policies having decreased from 100,000 on May 23, 1919, to 60,000 on June 13, 1919, and so on to 26,984 on September 19, 1919. But on October 10 there were 30,804, on October 24, 37,471, on October 31, 38,092, and on November 28, the date of the last report containing figures for civilian donations, there were 42,899 short-time policies lodged. This increase which was started by the railway strike was maintained by the molders' strike—the number of policies lodged by short-time workers in engineering and iron-founding industries having mounted from 186 men on September 19 to 3,735 on October 17 and to 16,074 on November 21.

Considering His Majesty's Forces' short-time policies only there were 4,687 lodged on November 28 (of which 3,833 were in engineering and iron-founding industries) and 5,241 on December 5. The number has since declined, as shown in Table 11, to 2,070 on February 13.

The molders' strike has been a long-drawn-out one, and as will be noticed, in its final week, ending January 23, the industries affected took over 98 per cent of the short-time policies lodged.

TABLE 11.—NUMBER OF HIS MAJESTY'S FORCES' POLICIES LODGED BY SHORT-TIME WORKERS AT EACH SPECIFIED DATE, BY INDUSTRY.

Industry.	Week ending—			
	Jan. 23, 1920.	Jan. 30, 1920.	Feb. 6, 1920.	Feb. 13, 1920.
Insured industries:				
Engineering and iron founding.....	4,330	3,683	3,251	1,813
Metal manufactures.....	13	1	1	1
Other insured industries.....	66	150	169	132
Total.....	4,409	3,834	3,421	1,946
Uninsured industries:				
Conveyance of men, goods, and messages.....	10	5	4	3
Mines and quarries.....	95	48	30	32
Textiles:				
Cotton.....	11	17	14	12
Woolen and worsted.....	14	21	14	13
Flax, linen, jute, and hemp.....	35	36	56	40
Dyeing, bleaching, and finishing.....	1	—	25	6
Other textiles.....	32	1	12	4
Commercial.....	17	22	19	5
Domestic offices and services.....	1	1	1	1
General laborers, factory workers, etc.....	6	6	9	7
Other uninsured industries.....	7	6	2	1
Total.....	229	163	186	124
Grand total.....	4,638	3,997	3,607	2,070

Review of the Employment Situation.

TABLES 12 and 13 show the numbers of unemployment donation policies remaining lodged at specified dates and numbers of persons on live registers of employment exchanges on the same dates.

Both are indications of the amount of unemployment, but neither can be accepted as absolutely indicative of the exact amount of unemployment.

A fall in unemployment as indicated by a decrease in the live register of employment exchanges is not always accurate, for while it may be due to an increase of employment it is likely to be partially at least due to a well-known disinclination to register at an employment exchange when the worker being in an uninsured industry is not entitled to draw payment.

The Weekly Report for December 16 states with reference to a recent 16 per cent drop in the live register for women: "The decreases chiefly occur in the uninsured industries, particularly domestic offices and services. This is an effect previously observed, that when payment of donation stops the persons concerned cease to register for employment."

The weeks following January 22 showed a reduction in the number of people on out-of-work donation of 22 per cent, from 396,495 January 23 to 310,598 on February 20. Nearly 10 per cent of the latter were drawing donation under the special extended period scheme.

Industrially the improvements in employment came from the further resumption of work in engineering and iron founding and iron and steel work and from a considerable impetus given to building and works of construction.

TABLE 12.—UNEMPLOYMENT DONATION POLICIES REMAINING LODGED, BY TYPE OF POLICY.

Week ending—	Men.			Boys.	Women.			Girls.	Grand total.
	Civil-ians.	His Maj-esty's Forces.	Total.		Civil-ians.	His Maj-esty's Forces.	Total.		
1918.									
Nov. 29.....	16,336	4,698	21,334	2,088	45,107	11	45,118	1,263	69,803
Dec. 6.....	31,768	11,264	43,032	4,801	77,824	62	77,886	2,864	128,583
Dec. 13.....	43,989	15,547	59,536	8,015	122,228	81	122,309	6,909	196,769
Dec. 20.....	63,413	18,604	82,017	11,128	167,009	37	167,046	9,170	269,361
1919.									
Jan. 3.....	101,390	23,938	125,328	16,988	224,955	50	225,005	13,374	380,695
Jan. 10.....	119,315	31,543	150,858	16,462	265,479	88	265,567	16,365	449,252
Jan. 17.....	139,113	40,400	179,513	18,131	303,813	131	303,944	18,018	519,606
Jan. 24.....	156,671	47,209	203,880	20,543	343,742	170	343,912	22,259	590,594
Jan. 31.....	177,361	53,316	230,677	22,562	399,864	238	400,102	25,362	678,703
Feb. 7.....	191,371	63,277	254,648	24,538	427,734	380	428,114	26,790	734,090
Feb. 14.....	212,205	84,298	296,503	26,752	452,810	394	453,204	28,183	804,642
Feb. 21.....	218,278	132,471	350,749	28,195	470,294	841	471,135	31,544	881,623
Feb. 28.....	227,836	165,429	393,265	28,019	494,471	828	495,299	32,037	948,620
Mar. 7.....	234,402	200,686	435,088	27,356	494,365	1,025	495,390	34,398	992,232
Mar. 14.....	208,540	233,737	444,277	26,327	485,784	1,161	486,945	31,070	988,619
Mar. 21.....	207,973	264,257	472,230	27,567	474,452	995	475,447	28,082	1,003,326
Mar. 28.....	209,486	305,251	514,737	26,461	488,655	1,012	489,667	29,380	1,060,245

TABLE 12.—UNEMPLOYMENT DONATION POLICIES REMAINING LODGED, BY TYPE OF POLICY—Concluded.

Week ending—	Men.			Boys.	Women.			Girls.	Grand total.
	Civil-ians.	His Majesty's Forces.	Total.		Civil-ians.	His Majesty's Forces.	Total.		
Apr. 4.	214, 263	336, 570	550, 833	26, 148	469, 555	961	470, 516	30, 189	1, 077, 686
Apr. 11.	217, 538	347, 895	565, 433	26, 093	457, 446	917	458, 363	30, 134	1, 080, 023
Apr. 18.	210, 119	369, 992	580, 111	23, 882	452, 144	1, 013	453, 157	29, 279	1, 086, 429
Apr. 25.	215, 687	379, 799	595, 486	23, 679	443, 941	1, 258	445, 199	28, 964	1, 093, 328
May 2.	214, 761	402, 151	616, 912	23, 040	422, 890	1, 316	424, 206	29, 242	1, 093, 400
May 9.	191, 651	408, 491	600, 142	10, 175	366, 536	1, 468	364, 604	20, 871	1, 008, 192
May 16.	178, 284	401, 753	580, 037	16, 845	312, 373	1, 603	313, 976	17, 023	927, 881
May 23.	164, 589	400, 097	564, 686	14, 988	250, 010	1, 939	251, 949	14, 869	846, 472
May 30.	150, 250	384, 919	535, 169	12, 912	207, 897	2, 002	209, 899	13, 231	771, 211
June 6.	135, 317	383, 570	518, 887	10, 405	169, 621	2, 082	171, 703	9, 880	710, 875
June 13.	123, 134	376, 735	499, 869	8, 439	146, 578	2, 033	148, 611	7, 910	664, 829
June 21.	116, 158	379, 139	495, 297	7, 551	132, 649	2, 108	134, 757	7, 491	645, 096
June 27.	106, 661	370, 696	477, 357	6, 615	113, 462	2, 147	115, 609	6, 544	606, 125
July 4.	100, 270	363, 926	464, 196	5, 905	100, 576	2, 271	102, 847	6, 077	579, 025
July 11.	96, 172	363, 564	460, 036	5, 341	91, 413	2, 204	93, 617	6, 155	565, 149
July 18.	92, 762	360, 792	453, 554	4, 985	83, 755	2, 190	86, 945	5, 707	550, 191
July 25.	93, 528	361, 157	455, 285	5, 226	72, 813	2, 206	75, 019	5, 354	540, 884
Aug. 1.	100, 228	364, 570	464, 798	6, 529	73, 878	2, 101	75, 979	6, 176	553, 482
Aug. 8.	98, 298	360, 585	458, 883	6, 245	64, 029	2, 156	66, 185	5, 673	536, 986
Aug. 15.	94, 863	359, 778	454, 641	6, 669	61, 065	2, 055	63, 120	6, 093	530, 523
Aug. 22.	92, 315	348, 660	441, 005	6, 267	55, 526	2, 095	57, 621	5, 182	510, 075
Aug. 29.	83, 035	334, 925	417, 960	5, 006	49, 038	2, 027	51, 065	4, 053	478, 084
Sept. 5.	72, 113	324, 786	396, 899	4, 008	40, 701	1, 965	42, 666	3, 041	446, 614
Sept. 12.	66, 686	310, 024	376, 710	3, 230	36, 230	1, 935	38, 165	2, 471	420, 582
Sept. 19.	63, 557	303, 348	366, 905	3, 111	34, 448	1, 905	36, 353	2, 334	408, 703
Sept. 26.	62, 335	300, 251	362, 686	3, 151	32, 915	2, 021	34, 936	2, 230	403, 003
Oct. 3.	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Oct. 10.	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Oct. 17.	70, 589	334, 616	405, 205	4, 371	29, 622	3, 332	32, 954	2, 586	445, 116
Oct. 24.	86, 036	339, 911	425, 947	6, 551	30, 396	3, 761	34, 157	2, 672	469, 327
Oct. 31.	94, 058	340, 244	434, 302	7, 349	30, 940	3, 998	34, 938	2, 838	479, 427
Nov. 7.	99, 013	336, 523	435, 536	7, 460	30, 323	4, 164	34, 487	2, 641	480, 124
Nov. 14.	101, 522	342, 000	443, 522	8, 130	28, 893	4, 591	33, 484	2, 404	487, 540
Nov. 21.	100, 320	348, 955	449, 275	8, 000	27, 030	4, 954	31, 984	2, 287	491, 546
Nov. 28 ¹		353, 668				5, 155			358, 823
Dec. 5.		344, 741				5, 303			350, 044
Dec. 12.		356, 069				5, 596			361, 635
Dec. 19.		365, 435				5, 245			370, 680
Dec. 26.									
1920.									
Jan. 2.		377, 957				5, 138			383, 095
Jan. 9.		388, 139				5, 007			393, 146
Jan. 16.		391, 422				5, 073			396, 495
Jan. 23.		380, 293				5, 072			385, 365
Jan. 30.		372, 173				4, 943			377, 116
Feb. 6.		339, 294				4, 800			344, 094
Feb. 13.		323, 725				4, 548			328, 273
Feb. 20.		306, 284				4, 314			310, 598

¹ No report, owing to railway strike.² On November 24, civilian donation for both men and women ceased.

TABLE 13.—NUMBER OF PERSONS ON LIVE REGISTERS OF EMPLOYMENT EXCHANGES ON SPECIFIED DATE.

Date.	Men.	Boys.	Women.	Girls.	Total.
1918.					
Dec. 6.	60, 582	10, 756	109, 269	8, 663	189, 270
1919.					
Jan. 10.	183, 335	26, 391	327, 715	26, 451	563, 892
Feb. 7.	303, 477	32, 448	479, 328	34, 243	849, 496
Feb. 14.	335, 911	34, 837	503, 704	37, 208	911, 660
Feb. 21.	376, 952	35, 907	533, 837	36, 203	982, 899
Feb. 28.	416, 150	35, 476	549, 261	35, 958	1, 036, 845

TABLE 13. NUMBER OF PERSONS ON LIVE REGISTERS OF EMPLOYMENT EXCHANGES ON SPECIFIED DATE—Concluded.

Date.	Men.	Boys.	Women.	Girls.	Total.
Mar. 7.....	449,365	34,010	558,572	33,891	1,075,838
Mar. 14.....	486,555	34,541	561,392	36,016	1,118,504
Mar. 21.....	527,559	33,429	565,740	35,482	1,162,210
Mar. 28.....	563,368	33,304	563,190	35,756	1,195,618
Apr. 4.....	579,373	33,909	559,379	36,365	1,229,026
Apr. 11.....	613,129	32,000	539,311	35,159	1,219,599
Apr. 18.....	630,999	30,500	547,735	35,164	1,244,398
Apr. 25.....	657,804	31,243	533,430	34,683	1,257,160
May 2.....	665,099	30,474	513,143	33,957	1,242,673
May 9.....	653,270	26,834	449,145	29,154	1,158,403
May 16.....	637,573	24,845	400,080	25,103	1,087,601
May 23.....	616,992	22,464	343,636	21,936	1,005,027
May 30.....	592,665	19,072	300,768	18,804	931,309
June 6.....	569,098	17,026	256,033	16,544	858,706
June 13.....	563,934	15,821	229,660	14,573	823,988
June 20.....	547,531	15,012	213,206	14,393	790,142
June 27.....	525,215	13,973	194,157	13,123	746,468
July 4.....	516,263	14,444	182,998	14,125	727,830
July 11.....	507,663	13,778	175,338	13,449	710,178
July 18.....	505,389	13,874	163,424	13,198	695,885
July 25.....	504,681	15,493	151,323	13,393	684,890
Aug. 1.....	517,443	17,300	149,464	15,248	699,455
Aug. 8.....	513,966		143,447		
Aug. 15.....	502,867	18,414	133,740	15,871	670,892
Aug. 22.....	488,491	17,388	127,173	14,444	647,496
Aug. 29.....	457,148	15,404	111,888	12,860	597,300
Sept. 5.....	433,591	14,398	105,565	13,007	566,561
Sept. 12.....	418,843	13,420	100,213	12,391	544,867
Sept. 19.....	407,307	13,359	96,623	13,047	530,336
Sept. 26.....	(1)	(1)	(1)	(1)	(1)
Oct. 3.....	(1)	(1)	(1)	(1)	(1)
Oct. 10.....	453,347	17,131	97,057	14,762	582,297
Oct. 17.....	461,801	17,107	94,552	13,996	587,456
Oct. 24.....	475,865	17,784	92,870	13,719	600,238
Oct. 31.....	479,520	18,597	89,252	13,305	600,674
Nov. 7.....	478,638	18,009	85,498	12,371	593,516
Nov. 14.....	486,157	17,653	79,326	11,702	594,838
Nov. 21.....	490,251	16,690	73,925	11,073	591,939
Nov. 28.....	484,344	14,526	66,242	10,029	575,141
Dec. 5.....	474,314	12,089	55,427	8,882	550,612
Dec. 12.....	473,180	11,575	52,538	8,476	545,769
Dec. 19.....	473,000	11,650	48,126	8,231	541,007
1920.					
Jan. 2 ¹	503,658	15,133	46,863	9,738	575,392
Jan. 9.....	508,879	16,529	49,462	11,610	586,500
Jan. 16.....	510,743	17,286	51,541	12,685	592,255
Jan. 23.....	501,020	16,717	52,966	12,760	583,463
Jan. 30.....	478,173	15,329	52,479	12,227	558,208
Feb. 6.....	443,085	13,831	51,899	11,666	520,481
Feb. 13.....	416,892	12,996	51,791	11,594	493,273
Feb. 20.....	392,604	12,092	53,902	11,340	469,838

¹ No report owing to railway strike.² Report for January 2, 1920, covers two weeks, owing to the Christmas holiday.

Table 14 classifies out-of-work donation policies lodged by industries and shows for specified dates the per cent policies lodged formed of the total number of workers in the industries. The figures may be taken as indicating approximately, but not absolutely, the unemployment in the several industries.

September 19 immediately preceded the railway and molding trades strikes, the effects of which are evident in the reports for subsequent dates.

TABLE 14.—PER CENT WORKERS REPRESENTED BY OUT-OF-WORK DONATION POLICIES REMAINING LODGED AT SPECIFIED DATES FORMED OF TOTAL WORKERS IN EACH INDUSTRY.

Industry.	Total workers. ¹	Per cent workers represented by policies remaining lodged in each industry form of total workers on—										Total workers. ²		Per cent workers represented by policies remaining lodged in each industry form of total workers on—			
		Mar. 7, 1919.	Apr. 4, 1919.	May 2, 1919.	May 30, 1919.	June 20, 1919.	July 18, 1919.	Aug. 15, 1919.	Sept. 17, 1919.	Oct. 17, 1919.	Nov. 21, 1919.			Nov. 21, 1919.	Dec. 19, 1919.	Jan. 16, 1920.	Feb. 20, 1920.
Insured industries:																	
Building and works of construction.....	593,659	11.10	10.73	10.65	7.86	6.40	5.25	4.28	3.41	3.83	4.76	3.13	749,818	2.48	2.64	2.95	2.01
Shipbuilding.....	286,188	6.52	5.97	6.15	5.17	4.61	4.56	4.52	4.29	4.85	5.95	3.09	283,688	2.89	2.91	3.18	2.14
Engineering and iron founding.....	1,412,693	14.00	12.11	10.39	7.63	6.21	5.24	5.15	3.89	5.00	7.16	3.83	1,156,733	4.68	5.32	5.89	3.97
Construction of vehicles.....	167,660	8.66	8.30	7.39	4.64	3.63	2.79	2.64	2.29	2.98	3.06	1.91	196,289	1.63	1.82	2.08	1.42
Sawmilling, packing-case manufacturing, etc.....	89,583	10.28	8.96	7.72	5.81	4.85	3.96	3.60	2.84	3.03	2.92	2.16	75,277	2.57	2.86	2.93	2.33
Ammunition.....	253,913	13.24	6.04	2.50	8.9	5.1	3.0	1.9	1.2	1.3	1.0	.05	117,642	.10	.11	.14	.08
Chemicals, etc.....	104,915	6.47	5.42	4.97	3.40	2.76	2.16	1.82	1.31	1.34	1.17	.71	100,072	.74	.73	.75	.56
Iron, steel, and other metal production.....	207,790	3.01	4.30	3.74	2.41	2.99	2.54	5.79	2.21	2.98	1.12	1.09	214,666	1.05	1.07	.96	.55
Metal manufactures.....	280,157	3.01	6.53	6.15	4.04	3.31	2.53	2.66	1.71	1.71	1.82	1.23	260,785	1.32	1.43	1.54	1.17
Bricks, tiles, etc.....	31,450	4.75	5.92	6.44	4.00	3.22	2.13	3.93	1.42	1.74	1.59	1.18	36,396	1.02	1.06	1.12	.86
Other insured industries.....	153,702	5.27	5.13	6.49	3.20	2.47	1.67	1.53	1.03	1.27	1.23	.78	251,280	.48	.55	.60	.49
Total.....	3,561,710	10.81	9.42	8.33	5.98	4.87	4.05	4.02	2.98	3.03	4.67	2.65	3,442,656	2.74	3.02	3.32	2.27
Uninsured industries:																	
Agriculture.....	1,175,000	1.15	.88	1.03	.96	.91	.86	.85	.70	.77	1.12	1.03	1,175,000	1.03	1.29	1.40	1.22
Conveyance of men, goods, and messages.....	975,000	7.88	10.42	12.14	11.22	10.45	9.61	9.06	7.86	8.17	8.02	7.03	975,000	7.03	6.91	7.33	6.05
Mines and quarries.....	1,030,000	1.34	1.75	1.71	1.36	1.31	.96	.92	.66	.73	.64	.47	1,030,000	.47	.41	.46	.27
Textiles:																	
Cotton.....	500,000	12.31	19.88	22.09	8.64	6.17	5.62	2.86	1.41	1.16	1.13	.71	500,000	.71	.74	.74	.57
Woolen and worsted.....	270,000	2.04	2.86	3.03	1.68	1.15	.87	6.48	.77	.67	.72	.50	270,000	.50	.50	.54	.38
Other (including printing, dyeing, etc.).....	360,000	9.73	14.61	16.76	8.20	7.74	6.29	2.55	2.42	2.10	1.79	1.18	360,000	1.18	1.23	1.27	.98
Commercial:																	
Food, drink, and tobacco.....	1,700,000	2.23	3.07	2.43	3.04	2.57	2.27	2.51	1.91	2.02	2.18	1.50	1,700,000	1.50	1.54	1.60	1.31
Workers in dress.....	480,000	4.00	5.22	5.70	3.88	2.96	2.17	1.86	1.60	1.86	1.61	1.26	480,000	1.26	1.44	1.55	1.37
Domestic offices and services.....	750,000	4.58	4.86	4.48	2.49	1.89	1.43	1.31	1.09	1.30	1.37	.94	750,000	.94	1.14	1.23	1.05
General laborers, factory workers, etc.....	2,500,000	3.09	3.84	4.03	2.54	1.87	1.45	1.25	1.07	1.07	1.07	.77	2,500,000	.77	.74	.75	.61
Other uninsured industries.....	1,000,000	13.87	15.07	15.47	11.89	10.68	9.52	8.05	8.55	8.25	7.55	2.90	1,000,000	7.55	7.72	8.20	6.67
Total.....	1,350,000	6.91	6.84	7.02	5.55	4.30	3.56	3.45	2.75	2.83	2.90	2.32	1,350,000	2.32	2.43	2.57	2.19
Total.....	12,090,000	5.02	6.14	6.59	4.62	3.90	3.36	3.20	2.48	2.61	2.69	2.14	12,090,000	2.14	2.21	2.33	1.93
Grand total.....	15,651,710	6.34	6.89	6.99	4.93	4.12	3.52	3.39	2.62	2.84	3.14	2.26	15,532,656	2.28	2.38	2.55	1.99

¹ For insured trades, number of books current January, 1919, for uninsured trades, Board of Trade returns for July, 1918, and census figures for 1911.² Both civilian and His Majesty's Forces.³ For insured trades, number of books current October, 1919, for uninsured trades, Board of Trade returns for July, 1918, and census figures for 1911.⁴ Civilian out-of-work donations ceased on Nov. 24. The figures under this head are for His Majesty's Forces only.

The number of civilian extended policies remaining lodged on November 21, 1919, are classified by industries in Table 15.

TABLE 15.—NUMBER OF EXTENDED-DONATION POLICIES, GRANTED TO CIVILIANS, REMAINING LODGED UP TO NOV. 21, 1919, BY INDUSTRY.

Industry.	Number of extended-donation policies remaining lodged Nov. 21, 1919, granted to—				
	Men.	Boys.	Women.	Girls.	Total.
Insured industries:					
Building and works of construction.....	1,971	9	7	1	1,988
Shipbuilding.....	985	14	1		1,000
Engineering and iron founding.....	4,912	117	276	12	5,317
Construction of vehicles.....	341	4	12		357
Sawmilling, packing-case manufacturing, etc.....	131	3	15		149
Ammunition.....	23	1	15		39
Chemicals, etc.....	98	2	18		118
Iron and steel and other metal production.....	248	7	10		265
Metal manufactures.....	177	1	123	4	305
Brick, tile, etc.....	19		10		29
Other insured industries.....	70		51	1	122
Total.....	8,975	158	538	18	9,689
Uninsured industries:					
Agriculture.....	111	5	26		142
Conveyance of men, goods, and messages.....	2,168	20	102	3	2,293
Mines and quarries.....	224	4	14	3	245
Textiles:					
Cotton.....	309	11	298	5	623
Woolen and worsted.....	79		22		101
Other (including printing, dyeing, etc.).....	332	14	554	29	929
Commercial.....	1,074	9	737	64	1,857
Food, drink, and tobacco.....	165		180	3	348
Workers in dress.....	120	1	554	32	707
Domestic offices and services.....	354		1,288	20	1,662
General laborers, factory workers, etc.....	2,924	41	620	12	2,597
Other uninsured industries.....	707	11	619	50	1,387
Total.....	8,540	116	5,014	221	13,891
Grand total.....	17,515	274	5,552	239	23,580

Resettlement.

Training and Placement of Disabled Ex-Service Men.

TABLE 16 shows, by industries, the actual results in placing disabled ex-service men who have been trained under the training schemes of the Ministry of Labor.

TABLE 16.—NUMBER OF REGISTRATIONS AND PLACEMENTS OF DISABLED SOLDIERS, SAILORS, AND AIRMEN, GREAT BRITAIN, BY INDUSTRY.

Number on live register—		New registrations during month ended Jan. 9, 1920.	Placements during month ended Jan. 9, 1920.	Number lapsed, canceled, etc.	Number on live register Jan. 9, 1920.
Nov. 7, 1919.	Dec. 5, 1919.				
38, 648	36, 503	13, 476	4, 960	10, 197	34, 824

Industry.	Placements ¹ during month ended—			Total place-ments up to Jan. 9, 1920.
	Nov. 7, 1919.	Dec. 5, 1919.	Jan. 9, 1920.	
Insured industries:				
Building and works of construction	240	212	246	4, 177
Shipbuilding.....	88	30	52	1, 093
Engineering and iron founding.....	481	500	361	8, 774
Construction of vehicles.....	37	45	61	579
Sawmilling, packing-case manufacturing, etc.....	65	35	37	619
Chemicals, etc.....	69	75	37	1, 268
Iron and steel and other metal production, and metal man- ufactures.....	45	66	58	937
Total.....	1, 025	963	852	17, 447
Uninsured industries:				
Agriculture.....	66	65	26	1, 103
Conveyance of men, goods, and messages.....	767	699	825	10, 496
Mines and quarries.....	77	90	61	732
Textiles: Cotton, woolen and worsted, and other (including printing, dyeing, etc.).....	215	234	173	1, 745
Commercial, food, drink, and tobacco.....	1, 086	1, 245	1, 012	10, 365
Workers in dress.....	73	46	24	559
Domestic offices and services.....	137	92	153	2, 097
General laborers, factory workers, etc.....	562	617	576	8, 133
Other uninsured industries.....	774	685	812	7, 747
Total.....	3, 757	3, 773	3, 667	42, 977
Grand total.....	4, 782	4, 736	4, 519	60, 424

¹ First placements only. Subsequent placements amount to 4,494 for the whole period, 426 for the month ended Dec. 5, 1919, and 441 for the month ended Jan. 9, 1920.

Apprenticeship Schemes.

Up to February 9, 1920, 25,328 agreements as to the completion of interrupted apprenticeships had been submitted to employers, completed, and sent to the training department of the Ministry of Labor. Up to September 8, 1919, reports were published showing the number of interrupted apprenticeship applications received from employers and from employees, and at that date 14,635 had been received from employers, 17,297 from employees, while 12,685 agreements had been submitted to employers for completion, and 11,172 completed agreements had been sent to the training department. In other words, 18 per cent more employees than employers had made application, and agreements for completion were submitted to 86 per cent as many employers as made application, while 88 per cent of the agreements submitted had been completed and sent to the training department.

Comparing this report with earlier reports it is found that the employers had been making application in an increasingly greater pro-

portion to the number of employees, that about the same proportion of agreements had been submitted to employers, and a rapidly increasing proportion of completed agreements had been sent to the training department. Since September these details have not been published.

The total number of completed agreements sent to the training department since the commencement of the interrupted apprenticeship scheme, classified by industries, is shown in Table 17.

TABLE 17. -NUMBER OF COMPLETED AGREEMENTS UNDER EACH SPECIFIED SCHEME UP TO FEB. 9, 1920, UNITED KINGDOM.

Industry.	Completed agreements sent to training department.	Industry.	Completed agreements sent to training department.
Engineering.....	10,402	Made-up leather goods.....	34
Furniture.....	1,105	Woolen and worsted.....	12
Shipbuilding.....	1,783	Hairdressing industry.....	56
Coach, motor body, van, etc.....	651	Lace and embroidery.....	168
Scottish baking.....	324	Surgical-instrument making.....	18
Printing and allied trades.....	3,434	Basket making.....	18
Iron founding.....	432	Optical-instrument making.....	26
Electric contracting.....	469	Glove making.....	30
Building.....	4,804	Diesinking and engraving.....	45
Brush making.....	45	General scheme.....	595
Printing (Scotland).....	767	Gold, silver, horological, and allied trades.....	260
Silk.....	6	Iron founding and light casting industry.....	134
Bookbinding, etc.....	481	Sheet and plate glass industry.....	97
Blacksmiths and farriers.....	203	Linen industry (Ireland).....	2
Cooperage.....	69	Bespoke boot and shoe making and repairing.....	91
Baking.....	83	Hydraulic packing industry.....	28
Engraving in calico and paper printing.....	75	Not yet analyzed.....	42
Pottery.....	21		
Dental mechanics.....	247		
Music trades.....	177		
Clothing industry.....	694		
Bobbin and shuttle making industry.....	43		
		Total.....	28,071

In the statement following, are shown, cumulatively, the numbers of completed agreements sent to the training department at specified dates:

1919:		1919—Concluded.	
May 5.....	9	Nov. 3.....	17,487
May 19.....	237	Nov. 17.....	19,117
June 2.....	1,078	Dec. 1.....	20,629
June 16.....	2,203	Dec. 15.....	22,278
June 30.....	3,587	Dec. 29.....	23,545
July 14.....	5,306	1920:	
July 28.....	6,875	Jan. 5.....	24,091
Aug. 11.....	8,161	Jan. 12.....	24,673
Aug. 25.....	9,748	Jan. 19.....	25,328
Sept. 9.....	11,172	Jan. 26.....	26,428
Sept. 22.....	12,704	Feb. 2.....	27,369
Oct. 6.....	(¹)	Feb. 9.....	28,071
Oct. 20.....	15,484		

¹ No report.

Training of Unemployed Women.

The scheme for the training of unemployed women does not appear to have attracted those for whom it was intended in anywhere near the proportion which might have been expected. Up to February 21, 1920, only 5,641 woman applicants had been interviewed and of these 1,007 had been definitely registered, 1,180 had completed their training and 2,644 were in training. The remainder of those who had been accepted ostensibly either were waiting opportunity for training, or had not yet decided to accept the opportunity offered. Table 18 indicates the occupations in which women are being trained.

TABLE 18.—NUMBER OF WOMEN TRAINED OR IN TRAINING IN SPECIFIED OCCUPATIONS IN GREAT BRITAIN UP TO FEB. 20, 1920.

Occupation.	Number trained or training.	Occupation.	Number trained or training.
Domestic service.....	1,153	Upholstery and carpet making.....	59
Nursery nurses.....	43	Burling and mending.....	63
Waitresses.....	59	Hairdressing.....	1
Laundry.....	72	Buffing and burnishing.....	86
Millinery.....	63	Boot closing.....	40
Dressmaking.....	891	Clerical.....	206
Tailoring.....	894	Hosiery.....	79
Velvet weaving.....	25	Assembling of speedometers.....	12
Blouse making.....	25	Harness weaving.....	8
Glove making.....	30		
Towel weaving.....	15	Total.....	3,824

Training of Widows and Dependents of Ex-Service Men.

Statistics of the training department's scheme for bettering the condition of widows and dependents of ex-service men by giving them industrial training appear in the following statement:

During the week ending February 14, 1920, 21 applications were received, 16 applications were sanctioned, while 21 were rejected or the applicants withdrew before training was commenced, and 6 completed training. The total numbers to date were 1,909 applications received, 989 sanctioned, and 772 rejected or withdrawn before training; 736 widows or dependents commenced training, 23 withdrew from training, 410 had completed training, and 303 were under training; while 254 applicants were awaiting decision, and 147 applicants, sanctioned, were awaiting training.

National Scheme for the Employment of Disabled Ex-Service Men.⁷

The following statement shows the results obtained up to February 13, 1920, of the scheme inaugurated in September, 1919, for a more rapid absorption into industry of disabled ex-service men through a closer cooperation of employers:

During the week ending February 13, 1920, 438 undertakings (proposals by firms) were accepted by the employment committee,

⁷ See MONTHLY LABOR REVIEW, January, 1920, pp. 205-207.

making a total accepted to date of 12,251, while 540 were awaiting decision. At the end of that week 119,675 disabled men were already employed by the 12,251 enrolled firms, leaving 4,797 vacancies to be filled to complete the quota (124,382) for whom employment had been guaranteed.

Appointments Department.

The following statements exhibit the results of the work of the appointments department of the Ministry of Labor. This department was inaugurated in April, 1918, to advise, arrange technical training for, and satisfactorily place ex-service men in commerce and the professions—at first disabled officers only, but after the armistice demobilized men in general and civilians as well.

Table 19 gives information as to the actual placing of men in positions for which they have been trained, and this is followed by statements as to the training grants scheme for business, professional, and university training.

TABLE 19.—STATEMENT OF THE WORK OF THE APPOINTMENTS DEPARTMENT.

Item.	Week ended—							
	June 6, 1919.				February 13, 1920.			
	Offi- cers.	Other ranks.	Civil- ians.	Total.	Offi- cers.	Other ranks.	Civil- ians.	Total.
Registrations during week.....	408	470	59	937	486	599	31	1,116
On live register at end of week.....	7,856	5,845	2,520	16,221	7,428	8,389	2,575	18,392
Placings during week.....	186	133	14	333	270	356	9	635
Placings to date.....	5,798		847	6,645	21,743		1,435	23,178
Vacancies notified during week.....				718				816
Vacancies carried forward at end of week.....				23,573				3,199

Up to February 13, 1920, 91,322 ex-service men (officers and other ranks) had applied for grants for business, professional, or university training and 17,813 of these applications had been canceled, leaving 73,509 to be considered. Of this number 43,488 had been sanctioned and 9,719 definitely rejected, while 33,745 were actually in training in courses averaging, according to class of course, from 15 months to two years and four months.

The total financial commitments up to the end of January, 1920, were £8,777,551,⁸ and of this amount payment had actually been made of £1,453,853. The average cost for maintenance and fees per trainee are given as £129 for courses averaging 15 months, £252 16s. for courses averaging two years (agricultural), and £312 for educational courses averaging two years and four months.

⁸ Owing to fluctuations in rates of exchange conversions are not made into United States money. Normally the par value of the pound is \$4.8665, and of the shilling 24.3 cents.

Report of Employment Exchanges in the United Kingdom.

AS REPORTED by the British Labor Gazette for February, 1920, the operations of the employment exchanges for the five weeks ending January 9, 1920, are summarized as follows:

The average daily number of registrations, of vacancies notified, and of vacancies filled during the five weeks was 14,132, 4,793, and 3,257, respectively.

Compared with the previous month, the daily average of registrations showed a decrease of 2.4 per cent, while the daily average of vacancies notified and vacancies filled showed decreases of 7.9 per cent and 8.4 per cent, respectively. The decrease in the number on the register at the end of this period shows recovery from the seasonal decline.

In the principal occupational groups the daily average number of applications from adults was 12,415—10,244 men and 2,171 women. There were 3,798 vacancies reported—2,028 men and 1,770 women. The average daily number of positions filled, when compared with the previous month, showed a decline of 11 per cent among men and 15 per cent among women.

The occupational groups in which there were the largest number of positions filled by men were: Building and construction of works, 24 per cent; engineering and iron founding, 16 per cent. Fifteen per cent were general laborers. Sixty-six per cent of the women were placed in domestic service and 6 per cent in the dressmaking trades.

As regards juveniles, the daily average of registrations was 1,717, while that of vacancies notified was 995. The daily average number of vacancies filled during the month as compared with the previous month showed an increase of 10 per cent.

Of the total vacancies filled for juveniles, 36 per cent were filled by applicants who obtained their first situation since leaving school.

Volume of Employment in the United Kingdom in January, 1920.

THE following figures as to the condition of employment in Great Britain and Ireland in January, 1920, as compared with December, 1919, and January, 1919, have been compiled from figures appearing in the British Labor Gazette for February, 1920. Similar information for October was published in the January **MONTHLY LABOR REVIEW**.

In January, 1920, as compared with December, 1919, relative to the number of persons employed, the largest increase, 7.2 per cent, appears among seamen, while respective increases of 5.2 and 4.5 per cent are shown in wholesale mantle, costume, blouses, etc., in London, and the same trade in Manchester. The largest decreases—1.9 and 1 per cent—appear in the food preparation trade and the printing trades.

Comparing January, 1920, with December, 1919, on the question of earnings of employees, increases of 6.6 and 5.9 per cent are shown in the jute trade and the lace trade, respectively. Percentage decreases of 2.2, 1.9, and 1.7 are shown in the food preparation, brick, and printing trades, respectively.

In comparing January, 1920, with January, 1919, as to the number of persons employed, dock and riverside labor shows an increase of 69.2 per cent; the cement trade, an increase of 68.2 per cent; and the glass trade, the printing trades, and the brick trade, respective increases of 46.7, 37.6, and 36.8 per cent. The only decreases shown are 1.3 per cent in the linen trade and 0.4 per cent in the printing trades.

The aggregate earnings of employees in January, 1920, as compared with January, 1919, show important changes, all of which are increases. Respective increases of 101.7, 74.5, and 73.9 per cent are shown in the cement, glass, and lace trades. Fourteen trades show increases ranging from 37.3 per cent in the cotton trade to 69.5 per cent in the printing trades, while the shirt and collar trade shows an increase of 33.6 per cent.

VOLUME OF EMPLOYMENT IN THE UNITED KINGDOM (GREAT BRITAIN AND IRELAND) IN JANUARY, 1920, AS COMPARED WITH DECEMBER, 1919, AND JANUARY, 1919.

[Compiled from figures in the Labour Gazette, London, February, 1920.]

Industry, and basis of comparison.	Per cent of increase (+) or decrease (—) in January, 1920, as compared with—		Industry, and basis of comparison.	Per cent of increase (+) or decrease (—) in January, 1920, as compared with—	
	December, 1919.	January, 1919.		December, 1919.	January, 1919.
Coal mining:			Shirt and collar trade:		
Average number of days worked.....	+0.7	+ 3.1	Number of employees.....	+1.3	+ 15.0
Number of employees.....	+ .2	+13.0	Earnings of employees.....	+1.9	+ 33.6
Iron mining:			Other clothing trades:		
Average number of days worked.....	— .7	— 1.0	Dressmaking and millinery—		
Number of employees.....	— .8	+ 6.6	Number of employees.....	+1.4	+ 23.5
Quarrying:			Wholesale mantle, costume, blouses, etc.—Number of employees—		
Average number of days worked.....	— .2	+ 3.6	London.....	+5.2	+ 14.9
Number of employees.....	— .5	+33.8	Manchester.....	+4.5	+ 4.3
Pig iron: Number of furnaces in blast.....	+5.5	—10.8	Glasgow.....	(³)	+ 4.5
Iron and steel works:			Corset trade—Number of employees.....	+2.1	+ 15.6
Number of employees.....	— .6	+ 8.3	Woodworking and furnishing: ²		
Number of shifts worked.....	— .4	+ 4.8	Number of employees.....	+ .1	+ 1.9
Tin plate, steel, and galvanized sheet trades: Number of mills in operation.....	+1.4	+34.5	Brick trade:		
Cotton trade:			Number of employees.....	— .3	+ 36.8
Number of employees.....	+2.0	+24.1	Earnings of employees.....	—1.9	+ 67.2
Earnings of employees.....	+2.0	+37.3	Cement trade:		
Woolen trade:			Number of employees.....	+1.7	+ 68.2
Number of employees.....	+1.1	+10.2	Earnings of employees.....	+3.6	+101.7
Earnings of employees.....	+1.0	+38.5	Paper, printing, and bookbinding trades:		
Worsted trade:			Paper trades—		
Number of employees.....	+1.4	+12.7	Number of employees reported by trade-unions.....	(¹)	(¹)
Earnings of employees.....	— .5	+44.8	Number of employees reported by employers.....	+2.4	+ 25.8
Hosiery trade:			Earnings of employees reported by employers.....	+1.8	+ 59.4
Number of employees.....	+2.0	+ 7.1	Printing trades—		
Earnings of employees.....	— .2	+38.2	Number of employees reported by trade-unions ²	+ .1	— .4
Jute trade:			Number of employees reported by employers.....	—1.0	+ 37.6
Number of employees.....	— .6	+ 3.5	Earnings of employees reported by employers.....	—1.7	+ 69.5
Earnings of employees.....	+6.6	+17.2	Bookbinding trades—		
Linen trade:			Number of employees reported by trade-unions ²	(³)	(³)
Number of employees.....	— .3	— 1.3	Number of employees reported by employers.....	+1.2	+ 26.5
Earnings of employees.....	+2.3	+ 5.4	Earnings of employees reported by employers.....	+2.6	+ 57.6
Silk trade:			Pottery trade:		
Number of employees.....	+1.4	+13.6	Number of employees.....	+1.2	+ 15.1
Earnings of employees.....	+ .1	+41.1	Earnings of employees.....	— .8	+ 40.8
Carpet trade:			Glass trades:		
Number of employees.....	+1.5	+29.4	Number of employees.....	+2.6	+ 46.7
Earnings of employees.....	+3.6	+60.7	Earnings of employees.....	+ .9	+ 74.5
Lace trade:			Food preparation trades:		
Number of employees.....	+3.2	+31.4	Number of employees.....	—1.9	+ 33.7
Earnings of employees.....	+5.9	+73.9	Earnings of employees.....	—2.2	+ 57.4
Bleaching, printing, dyeing, and finishing:			Dock and riverside labor: Number of employees.....	— .2	+ 69.2
Number of employees.....	+1.6	+19.4	Seamen: Number of employees.....	+7.2	+ 9.8
Earnings of employees.....	(¹)	+54.6			
Boot and shoe trade:					
Number of employees.....	+1.0	+16.8			
Earnings of employees.....	+ .9	+40.8			
Leather trades: Number of employees ²	(³)	+ .6			
Tailoring trades:					
Number of employees.....	+ .4	+ 1.9			
Earnings of employees.....	+1.9	+15.1			

¹ No report.

² Based on unemployment.

³ No change.

CHILD LABOR.

Employment of Children Under Federal Child Labor Tax Law.

THE National Child Labor Committee (105 East Twenty-second Street, New York City) has recently issued a statement directing attention to the fact that the decision of Judge James E. Boyd, of the Western Judicial District of North Carolina, granting an injunction preventing an employer from discharging or limiting the hours of work of a child subject to the Federal child labor tax law applies to one specific case only. It had been generally thought that Judge Boyd's decision affected the employment of minors in the entire western judicial district of the State. It is announced that so far this is the only instance of record where a child may be legally employed for more than 8 hours a day. The National Child Labor Committee states:

In a letter to the National Child Labor Committee, Miss Nila F. Allen, head of the Child Labor Tax Division of the Treasury Department, says:

Unlike the situation under the Federal child labor law, declared unconstitutional June 3, 1918, the injunction secured in the case of the Federal child labor tax law applied only to the employment of one child in the Atherton Mills, Charlotte, N. C.

The child labor tax has been and is being enforced in all sections of the country, including the Western Judicial District of North Carolina.

It should be remembered that the Federal child labor tax law applies only to mines, quarries, factories, and similar establishments. It is estimated that 85 per cent of the working children in this country are in industries not covered by the law.

Regulation of Child Labor in Czecho-Slovakia.

ON JULY 17, 1919, the National Assembly of the Czecho-Slovakian Republic passed a child labor law which was promulgated on July 28, 1919, and became effective three months after its promulgation.¹

The law defines as children all boys and girls who have not completed their fourteenth year of age. Child labor within the meaning of the law is the regular employment of children at whatever labor for or without compensation. The performance of work by children

¹ Amtliche Nachrichten des Deutschösterreichischen Staatsamtes für Soziale Verwaltung. Vol. I, No. 19. Vienna, Oct. 15, 1919, pp. 774-777.

for purposes of training or instruction, as well as the employment of children at casual jobs, and the employment of own children at light, although regular, household work, is not to be considered child labor. Own children within the meaning of the law are children living in common household with the employer, who are related to him by blood or marriage up to the third degree, or live with him as foster children or wards.

The employment of children at manual labor or other occupations is permissible only in so far as it does not endanger their health, their physical and mental development, or their morals, and in so far as it does not interfere with their attendance at school.

The employment of children who have not completed their twelfth year of age is prohibited. Children over 10 years of age may, however, be employed at light agricultural or household work.

On school days children may not be employed at labor in excess of two hours. Their employment at labor before the morning session of school and during the two hours preceding the afternoon session is prohibited. With respect to agricultural and household work this prohibition is limited by the law to two hours preceding the school session. A period of recreation of one hour is to be granted after school hours. On school holidays children may not be employed at labor in excess of 4 hours, except that in agricultural and household work employment may not exceed 6 hours.

The employment of children at labor on Sundays and church holidays is prohibited.

Children employed in agriculture and at household work must be allowed an uninterrupted night rest of 10 hours from 8 p. m. to 6 a. m. In all other fields of child labor the employment of children between 8 p. m. and 7 a. m. is prohibited.

The law provides for the granting of exemptions from the provisions regulating the hours of labor and the Sunday and holiday rest in the case of work of an urgent nature.

In restaurants, saloons, cafés, etc., children may not be employed at dispensing drinks or serving patrons. Neither may they be employed in taking part in public performances, unless such performances are of an educational, artistic, or scientific nature. In addition the law prohibits the employment of children in a number of establishments and occupations specified in a list appended to the present article.

If an employer employs other than his own children for compensation in money he may deduct from their wages only lodging, board, clothing, and school supplies furnished by him and the prices charged therefor may not exceed the actual cost. Children may not be given alcoholic beverages as compensation for their work.

Whoever employs other children than his own must without delay report their employment to the communal authorities of his place of residence, indicating the nature of his establishment and of the employment of the children. He must also keep a correct list of the children employed and, on request, submit this list to the proper supervisory officers.

Anybody intending to employ other children than his own must previously apply to the communal authorities for a work card for each child. For children already employed on the coming in force of the present law a work card must be procured within three days. The cards are to be issued for one year and must be renewed on their expiration. They are to be issued free of charge by the communal authorities of the place of residence of the child after a hearing of the legal representative of the child and of the competent school authorities. If the communal or school authorities doubt the physical or mental fitness of the child for the labor in question the child must be examined by the communal physician at the expense of the employer. The issuance of a work card must be refused if in the opinion of the physician or the school authorities the labor in question would endanger the morals or the physical or mental development of the child.

The law charges the political authorities of the first (lowest) instance with the enforcement of its provisions. In addition, it provides for the appointment of special supervisory officials whose principal duty shall be the inspection of those establishments which employ children.

Contraventions of the law, if not subject to severer penalties in accordance with other laws, are punishable with fines up to 1,000 crowns or imprisonment up to three months. Illegal employment of own children is punishable by a reprimand, or in case of aggravating circumstances, with a fine up to 300 crowns or imprisonment up to 14 days. Persons convicted of a contravention of the law may temporarily or permanently be enjoined by the political authorities from employing children.

The law authorizes the Minister of Social Welfare to conclude agreements with foreign countries for assuring the application abroad of the principles of the present law.

Establishments and Occupations in which Employment of Children is Prohibited.

FOLLOWING is presented a list of the industrial establishments and occupations in which the employment of children is prohibited:

I. Establishments.

- Retail sale of alcoholic beverages, distilleries, beer and wine cellars, breweries.
- Establishments manufacturing articles made of slate, with the exception of shops merely effecting the dyeing, painting, pasting, and packing of slate pencils and the dyeing, ruling, and framing of slates.
- Stone quarries and pits.
- Establishments of stonemasons, rock borers, and stone polishers.
- Brick kilns, street paving, and carpenters' establishments.
- Lime and gypsum burning.
- Manufacture and painting of pottery, tile, and flagstones.
- Glass blowing, etching, polishing, frosting and painting, with the exception of glass-works in which the blowing is done exclusively at the lamp.
- Mirror silvering establishments.
- Establishments in which objects are being enameled, electrogalvanic plated or electrolytic reproductions manufactured.
- Establishments in which lead and tin toys are being painted, lead, copper, tin, and brass works.
- Establishments for metal bronzing.
- Establishments in which lead, copper, zinc, or alloys of these metals are being worked up or used.
- Establishments for metal polishing, manufacture of files, harness making.
- Establishments using mercury.
- Establishments producing, working up, or using lead or lead compounds.
- Establishments for the manufacture of explosives, fireworks, matches, and other inflammables.
- Establishments manufacturing celluloid articles.
- Chemical establishments.
- Dead animal recovery plants.
- Chemical bleaching and dyeing works.
- Rag sorting establishments.
- Establishments for the salting, dressing, and tanning of skins and hides.
- Manufacture of rubber and gutta-percha articles.
- Horsehair spinning mills, rabbit-hair cutting establishments, and other establishments in which animal hair is worked up.
- Establishments for the cleaning and dressing of hair and bristles, brush factories.
- Mother-of-pearl goods factories.
- Bakeries.
- Butcher shops, establishments for the cleaning of feathers for bedding.
- Chemical laundries.
- Establishments of painters, decorators, and lacquerers.
- Liveries and teaming establishments.
- Turners' shops.
- Flour mills.
- Chimney-sweeping establishments.

II. Occupations.

Attendance of power engines and all machines operated by power, power transmission, elevators.

Attendance of machines operated by hand, with the exclusion of ordinary hand winding-off machines, bobbin reels, and so-called spinning machines for the manufacture of artificial flowers.

Attendance of gins or similar dangerous engines.

Attendance of straw and feed-cutting machines.

Building and excavating work.

Employment at apparatus in which are contained fluids, steam, or gases under pressure.

Furnace and open-hearth work.

Employment at work involving the generation of dust or gases.

Collection and assorting of rags, junk, etc.

Mixing or milling of paint.

Work in beer, wine, and other cellars.

Setting up of pins in bowling alleys.

Breaking of stones.

Lifting, carrying, or moving of heavy burdens

Woodcutting or chopping.

Thrashing.

Mowing.

Beater of game at battues.

Drawing in of nets in fishing.

INDUSTRIAL ACCIDENTS AND HYGIENE.

Use of the Geophone for Mine Rescue Work.

ACCORDING to Safety, the bulletin of the Safety Institute of America, for November-December, 1919,¹ the United States Bureau of Mines has been developing the geophone, or listening instrument used in war operations, for peace-time uses in mines. It is suggested by the bureau that this instrument will be of value to mine-rescue crews who may be entering mines for exploration, and for locating miners who have been entombed after a disaster. The instrument was invented by the French during the war for the purpose of detecting enemy sapping and underground mining operations and for the location of enemy artillery.

During the same period, according to the account in Safety, engineers of the mining division of the United States Bureau of Mines were engaged in experiments for the purpose of determining the distance that the various mining machines could be heard through clay, shale, coal, and the mine cover. Measurements were also made of the energy required to make blows heard for definite distances through clay, shale, and coal, as well as of the distances at which the shock waves resulting from the discharge of various explosives could be heard. The factors influencing the transfer of energy from a mining tool to the clay and coal were also investigated, in order that recommendations could be made as to the type of mining machine which could be used to accomplish the greatest amount of work with a minimum of noise.

The mechanism and operation of the geophone are described as follows:

The instrument, though small, is essentially a seismograph, since it works on the same principle as the ponderous apparatus with which earthquake tremors are recorded. It consists of an iron ring about $3\frac{1}{2}$ inches in diameter, within the center of which is suspended a lead disc which is fastened by a single bolt through two mica discs, one of which covers the top and the other the bottom of the ring. There are two brass cap pieces, the top one having an opening in its center to which is fastened a rubber tube, leading to a stethoscopic earpiece. These cap pieces are fastened with bolts to the iron ring and serve also to hold the mica discs in place.

We then have nothing but a lead weight suspended between two mica discs cutting across a small air-tight box. If the instrument is placed on the ground and a person is pounding or digging in the vicinity, energy is transmitted as wave motion to the earth, and the earth-waves shake the geophone case. The lead weight, on account of its mass and because it is suspended between the mica discs, remains comparatively motionless. There then is produced a relative motion between the instrument case

¹ Safety. Bulletin of the Safety Institute of America. November-December, 1919. New York. Pp. 206-208.

and the lead weight. The result is that a compression and rarefaction of the air in the instrument takes place. Since the rubber tube leading to the stethoscopic ear-piece is connected with this space in the geophone, this rarefaction and compression is carried to the eardrum.

As usually two instruments are used, one for each ear, it has been found that the sound is apparently louder from the instrument nearer the source of the sound. By moving the instruments properly, however, a point can be found where the sound will be of the same apparent intensity in both ears. The direction of the sound is then on a perpendicular to the line connecting the centers of the two instruments either in front of or behind the observer. Further observation will show which side. Direction of sound is quite accurately determined in this way.

An Occupational Dermatosis Observed in the Leather Trade.

A SKIN complaint which attacks certain employees engaged in fellmongers' yards is discussed by Dr. R. Prosser White in *The Journal of Industrial Hygiene* (Boston) for February, 1920. He assigns the condition to a hitherto unreported cause and says:

In the first stage of the leather trade fresh skins, called pelts, are cured, and the epidermis with its appendages removed. In the case of sheep and the smaller animals this is done in fellmongers' yards. The skins of cattle, horses, deer, pigs, etc., required to make other varieties of leather are cured and unhaired at different establishments or in the annexes to tanyards. The treatment is very much the same in both.

In the fellmongers' yard, if the hair or wool is intended to remain on the pelt, this is steeped in brine. If the wool requires removing, the fleshy sides of fresh or salt-free sheepskins are laid against each other, having previously been liberally brushed over with a thick cream containing an excess of slaked lime and 5 per cent sodium sulphide. They are then lifted into the floods or vats by men called jobbers or washers. After remaining there for a sufficient time the pelts are carried to the washing pits by the curers.

Gloves are invariably worn for the first removal, particularly in the foreign pelt trade, where a very strong solution of sodium or calcium hydrosulphide is used as a quick unhairer.

In the second removal, and also during inspection, the hands are bare, and the beginner or careless worker suffers great discomfort owing to redness, tenderness, and cracks which appear on the hands from these chemicals. In these workmen as many as four to a dozen small ulcers, the size of a split pea, will be seen on the sides of the knuckles and on the interdigital skin of the fingers. The knuckles are swollen and inflamed.

The pelts are then conveyed to the unhairing room and placed, hair uppermost, on the pulling beam. The pullers scrape off the hair or wool by rubbing down the woolly skin with the balls of the naked thumbs and the ulnar edges of the palms of both hands. The characteristic rash and holes appear on these parts in the pullers. An expert puller will unwool 1,000 sheep in a week.

The interaction of sodium sulphide with milk of lime produces calcium hydro-sulphide and caustic soda. These cause the mischief in this particular trade. If neglected, the ulcers penetrate deeply, the sores easily becoming infected, causing inability to work.

An effective trade-shop remedy is a drop of Stockholm tar applied to each hole. This appears to act as a protective, enabling the men to "carry on." Frequent washings of the hands in a weak solution of vinegar and water, followed by the thorough rubbing in of an ointment, are helpful preventives.

The author gives the formula for an ointment which he has found effective in such cases.

Minister of Hygiene for France.

AN INNOVATION has been made by Premier Millerand in the organization of the new French cabinet by the creation of the office of Minister of Social Hygiene, Social Insurance, and Social Provision (*Ministère de l'hygiène, de l'assurance et de la prévoyance sociales*), as noted in the foreign correspondence of the Journal of the American Medical Association (Chicago) for March 6, 1920. The question of appointing a special minister of public health has been considered since 1902, and the present action consists in giving permanent form to the temporary organization, under the chairmanship of M. Clemenceau, of a ministerial conference which grouped together all the services having to do with health and hygiene that had been previously scattered through five ministerial departments. The new office of minister of hygiene has been conferred upon J.-L. Breton, whose experience as chemical engineer, adviser to the Chamber of Deputies in matters of social hygiene, and author of the bill to suppress the use of white lead in building paint made him the "logical choice for the new post."

WORKMEN'S COMPENSATION.

Workmen's Compensation Law of Virginia Amended.

THE Workmen's Compensation Commission of Virginia secured the cooperation of employers and employees in the enactment of a law amending in several respects the compensation act of the State. The fact of this cooperation is regarded as a reflection of "the true spirit that underlies legislation of this character—the bringing together into closer relationship of all employers and employees."

The first amendment provides for the subrogation of the employer to any right an injured workman may have to sue in damages a third party legally liable for the injury. Any excess recovered by the employer in the suit shall be for the benefit of the injured person or his beneficiaries, and no compromise settlement may be made by the employer or insurance carrier in such a case without the approval of the industrial commission.

The second amendment extends the time for the furnishing of medical service from 30 days to 60 days; while the third provides payment of compensation for the two weeks' waiting time in case of a disability continuing more than six weeks. The maximum weekly payment for disability or death is increased from \$10 to \$12 and the maximum total from \$4,000 to \$4,500.

Instead of the loss of an eye the loss of vision entitles to compensation, and a permanent partial loss is to be proportionately compensated. A new subsection provides for compensation for the permanent loss of use of any member as for the loss of the member, and a permanent partial disability loss or loss of use is to be proportionately compensated.

The salaries of the members of the commission are increased from \$3,600 per annum to \$4,200 and of the secretary from \$2,000 to \$3,000. The commission is also given authority in its own right to enforce the attendance of witnesses and the production of books and papers without having to call on a court to render this service for it, as under the original act.

There was considerable activity in behalf of a State insurance fund, which had strong support but failed of enactment. It is said that a competitive fund might have been provided for, but was not desired by the friends of the measure.

Compensation Table for Visual Losses of One Eye.

By FRANK ALLPORT, M. D.

THIS is a table for the estimation of compensation to be paid workmen who have suffered partial or complete loss of vision of one eye through accident or occupation. At present no recognized standard of compensation conclusions exists. Chaos and uncertainty abound, and apparently one medical expert's guess is as good as another's. Several compensation tables have been proposed, but none have proven acceptable. No table can be perfect, because of varying conditions accompanying each case. Some reasonable standard is, however, essential, as a working basis, by which litigation may be guided. Everyone recognizes that the old Snellen test type fractions are incorrect and misleading. For instance, 20/40 does not mean a one-half loss of vision, nor 20/50 a three-fifths loss of vision, etc., and yet this is the method of estimating lost vision prevailing in our courts. The Chicago Ophthalmological Society (the largest local eye society in the United States) at its meeting November 10, 1919, adopted the following table as its official expression of opinion as to what constitutes a fair basis of settlement of visual losses in one eye following accidents, etc. This matter has been under consideration by the society for two or three years and this table voices its deliberate opinion, and it is fair to presume can be safely recommended for general adoption. There are, of course, other features concerning visual losses that must always be considered, such as injuries to both eyes, vision after cataract operations, progressive optic atrophy, corneal scars, etc. Personal medical expert opinion will always be necessary, table or no table, but some standard is essential as a basis for settlements. Such a standard should not be the opinion of one man, but should be the thoroughly considered sentiment of a scientific, well-recognized organization of eye surgeons. The table submitted has the indorsement of the Chicago Ophthalmological Society, and is probably as fair and equitable as a table can be made at this time.

Basis of settlement of visual losses in one eye.

20/ 20	indicates 100	per cent of visual efficiency and	no	loss of vision.
20/ 30	"	94.5 per cent	" " " "	5.5 per cent " " "
20/ 40	"	89.0 per cent	" " " "	11.0 per cent " " "
20/ 50	"	83.5 per cent	" " " "	16.5 per cent " " "
20/ 60	"	78.0 per cent	" " " "	22.0 per cent " " "

20/ 70	indicates	72.5 per cent	of visual efficiency	and 27.5 per cent	loss of vision.				
20/ 80	"	67.0 per cent	" "	" "	33.0 per cent	" "	" "	" "	" "
20/ 90	"	61.5 per cent	" "	" "	38.5 per cent	" "	" "	" "	" "
20/100	"	56.0 per cent	" "	" "	44.0 per cent	" "	" "	" "	" "
20/110	"	50.0 per cent	" "	" "	50.0 per cent	" "	" "	" "	" "
20/120	"	41.0 per cent	" "	" "	59.0 per cent	" "	" "	" "	" "
20/130	"	36.5 per cent	" "	" "	63.5 per cent	" "	" "	" "	" "
20/140	"	32.0 per cent	" "	" "	68.0 per cent	" "	" "	" "	" "
20/150	"	28.5 per cent	" "	" "	71.5 per cent	" "	" "	" "	" "
20/160	"	23.0 per cent	" "	" "	77.0 per cent	" "	" "	" "	" "
20/170	"	18.5 per cent	" "	" "	81.5 per cent	" "	" "	" "	" "
20/180	"	14.0 per cent	" "	" "	86.0 per cent	" "	" "	" "	" "
20/190	"	12.0 per cent	" "	" "	88.0 per cent	" "	" "	" "	" "
20/200	"	10.0 per cent	" "	" "	90.0 per cent	" "	" "	" "	" "

Snellen's test letters are used and should be hung in a good light 20 feet from the applicant. The uninjured eye should be covered during the test. Vision is expressed in fractions. The distance of the applicant from the letters constitutes the numerator of the fraction; the smallest line seen constitutes the denominator. Thus, if the applicant is seated 20 feet from the letters and can see the line marked 20, his vision is 20/20 or normal. If he can only see the 50-foot line, his vision is 20/50, etc. The applicant should be given credit for a line if he can read a majority of the letters in the line.

This table assumes that if an injured applicant can see the 200 line while sitting 20 feet away, in other words, if he has still a vision of 20/200, he is not industrially blind—his visual efficiency is 10 per cent and his visual loss is 90 per cent. If his vision is worse than 20/200 he is industrially blind. From 20/200 vision is gradually scaled up to 20/20 or normal, by fractions of 10, as will be seen on the table, and estimations of visual efficiency and visual losses deducted thereby. Such estimations and the financial awardings will, of course, have to be governed by the laws in the various States.

My advice, therefore, in the interest of harmony, uniformity, and equity, and because the above table has been officially adopted by the Chicago Ophthalmological Society, and will receive its indorsement and support, is to abandon all other tables and endeavor to secure the adoption of the above table by industrial commissions, courts of justice, corporations, accident companies, attorneys, physicians, etc.

SOCIAL INSURANCE.

Report of the Illinois Pension Laws Commission, 1918-19.

THE Report of the Illinois Pension Laws Commission, 1918-19, is the title of a volume of 379 pages issued by a commission created by an act of the Illinois Legislature, bearing date of June 14, 1917. This commission of four persons was charged with the duty of investigating the operation of existing pension laws in the State and of gathering information as to cost of maintenance and other details of operation. Similar laws of other States and countries were also to be studied. A commission of like function had been appointed in 1916 and the present commission was largely a continuation of the earlier one. A number of pension laws were enacted in 1917, and at present there are 15 pension laws on the statute books of the State. The funds now in existence relate to policemen, firemen, teachers, and a few other classes of municipal employees. There are separate laws for Chicago and for other sections of the State. The general charge is made that the existing funds are financially insecure and that the laws lack uniformity and comprehensiveness.

The commission presents "a proposed standard plan for a comprehensive and permanent system of pension funds to replace the unsound systems under the present pension laws for public employees in Illinois." The plan provides for compulsory contributions, with certain exceptions. The proposed plan has for its central feature the accumulation of a sufficient amount to provide an annuity at the age of retirement equal to a definite percentage of the highest salary of the retiring employee. "These accumulations would accrue from contributions made by the public as employer and by the employee at a fixed ratio." Provision is also contemplated for the widows of employees dying before attaining the age of retirement, and for survivorship annuities for the widows of retired employees. Withdrawal from service is also provided for under a variety of conditions. The scheme covers old age inefficiency, death, sickness, and accidents.

A standard retirement age of 55 years is fixed for policemen and firemen and 60 years for all other employees, with a minimum age of retirement of five years lower. Policemen and firemen are to retire on 50 per cent of their salary and others on 40 per cent, if their

accumulations are sufficient to pay so much. The ratio of contribution between the employer and the employee is three to one for policemen and firemen and two to one in other branches of the public service, contributions by the employee being limited to 4 per cent of salary and by the employer to 12 per cent of salary in the case of policemen and firemen and to 8 per cent in the case of other employees. No amount of salary in excess of \$2,500 is to be considered as the basis of either contributions or annuities. Interest at 4 per cent is compounded annually on contributions made by or in behalf of employees, and refunds prior to retirement are to be made at that rate.

The foregoing provisions relate to retirement annuities only. Life insurance is a separate provision, the public and the employee to bear the expense equally, employee's contributions not to exceed 2 per cent of his salary. The amount of the insurance is limited to 175 per cent of the annual salary in the case of policemen and firemen, and 125 per cent in other cases. Sickness and accident insurance are likewise sustained by equal contributions of the public and employee, where the misfortune is not the direct result of the performance of duty, the benefits to be paid in monthly installments equal to 30 per cent of employee's salary, unless the employee attains the standard age of retirement before recovery. Where disability results directly from the service, the expense is borne entirely by the employer. In this case the monthly payment to the employee is 75 per cent of his salary, payments to be continued during disability unless employee attains, before recovery, an age five years beyond standard age of retirement.

The claim is made that the system is worked out on a sound actuarial basis, and illustrative tables are provided to demonstrate its operation in its various lines. A complete draft of a bill is presented, the administration to be in the hands of retirement boards for each of the 11 groups of employees provided for in the measure.

A survey of the various positions in the public service of the State, statistics of ages, years of service and salaries of certain classes of employees, the effect of pension legislation of 1917, court decisions on pension systems, and a digest of the laws enacted in 1917 make up the remainder of this study in so far as the State is concerned. Other chapters discuss recent developments in pension legislation in other States of the Union, and the world's experience in the operation of public service pension systems. Industrial and institutional pension systems are also briefly considered.

Regulation of the Employment Service and Unemployment Insurance in Italy.¹

IMMEDIATELY upon the signing of the armistice, consideration was given by the Italian Government to the question of providing relief against the involuntary unemployment which would be the natural result of the transformation of industry from a war to a peace basis and of the demobilization of the army, and by a decree of November 17, 1918, an appropriation of 100,000,000 lire (\$19,300,000, par) was made for this purpose.² By additional decrees, provision was made for the establishment of an elaborate system of employment offices in conjunction with existing governmental agencies and private organizations and also for the payment of unemployment grants.

Establishment of Central Employment Office.

UNDER the terms of the decree of November 17, 1918, a central employment office for manual workers was established in the Ministry of Industry, Commerce, and Labor, which was given supervision over the activities of all local bodies engaged in the placing of labor, and whose duty it should be to study questions relating to the employment of labor both in Italy and abroad. In connection with the central employment office, a consulting and advisory commission was appointed, composed of representatives of industrial and agricultural employers and workers, and representatives of the Government departments concerned. It was further provided that in each prefecture or provincial government a provincial labor commission (*commissione di avviamento al lavoro*), charged with the collection of requests for and offers of labor transmitted by the communal commissions, should be established.

The State railway administration is authorized to grant the special military rates to groups of five or more workers of either sex who travel third class at their own expense to the same locality for employment, provided such groups hold a certificate from an employment office or labor commission.

In every commune where a properly constituted employment office has been established, a labor commission is provided for, composed of a representative of the communal government, who shall be neither of the employing class nor of the working class, and of a representative of each of these classes. These communal commissions are charged with gathering and registering requests for and

¹ This summary is based on the following sources:

Italy: Ufficio Nazionale per il Collocamento e la Disoccupazione. *Il Mercato del Lavoro*. Vol. 1, No. 1. Rome, Dec. 1, 1919. *Gazzetta Ufficiale*, Rome, Dec. 10, 1919.

United States: Bureau of Foreign and Domestic Commerce. *Commerce Reports*, Dec. 11, 1919, pp. 1440 ff.; Dec. 29, 1919, pp. 1765 ff., and a communication from the commercial attaché at Rome to the director of this bureau, dated Jan. 12, 1920.

² See *MONTHLY LABOR REVIEW*, Apr., 1919, p. 225.

offers of labor presented by residents of the commune. Where municipal labor offices exist, the commissions and committees established by such offices may be authorized to act as communal labor commissions, provided they are composed of an equal number of employers and workers.

Provision is made for the extension of financial aid by the Government to employment offices for manual workers of the following classes:

1. Those established by the Provinces and communes;
2. Those established jointly by agreement between employers and workers;
3. Those established by labor organizations and recognized by the corresponding employers' organizations, or vice versa, for placing workers in particular industries.
4. Those established by charitable institutions or similar bodies.

Aid may also be granted to other organizations which promote the establishment of employment offices on a proper financial and administrative basis.

With the exception of those established by labor organizations, the management of employment offices is confined to a commission consisting of two members representing the employers and two representing the workers. These members nominate the president. Employment offices established or registered under this decree assume no responsibility for the exact fulfillment of labor contracts concluded through their mediation. In the case of disputes regarding labor agreements the employment office suspends the placing of labor in the establishment in question either directly or so far as other offices are concerned, until a settlement has been reached.

Decree of February 9, 1919.

For office workers and others who do not perform manual labor, provisions similar to the above are made by the decree of February 9, 1919. Financial aid is extended by the State to employment offices established in this connection, which are placed under the supervision of the central employment office, and provision is made for representation on the central advisory committee. In place of establishing separate employment offices for nonmanual workers, separate departments may be provided for them in the general employment offices. In addition to granting aid to employment offices for nonmanual workers, the State makes contributions to professional and welfare associations for this class of workers, which grant unemployment relief to their members.

Recent Changes in Plan of Organization—Unemployment Insurance.

AS A result of the experience gained by the Italian Government since the signing of the armistice in November, 1918, in combating unemployment, new measures were recently enacted in a

decree dated October 19, 1919, and published in the Gazzetta Ufficiale of December 10. These measures make radical changes in the plan of organization and the provisions for the payment of unemployment grants established by the decrees of November 17, 1918, and January 5, 1919, and should produce more satisfactory results. In addition to modifying the administrative organization previously established in such a way as to centralize and coordinate more effectively all the activities of the Government with regard both to employment and to unemployment, provision is made for the establishment of a permanent system of unemployment insurance which will be maintained through a fund to which not only the State but also the employers and the workers will contribute.

The decree of October 19, 1919, consists of 56 articles grouped under four titles. Its provisions are summarized below.

Changes in Administrative Organization.

A single office, called National Employment and Unemployment Office (*Ufficio Nazionale per il Collocamento e la Disoccupazione*), is to be established in the Ministry of Industry, Commerce, and Labor, which will replace the two offices created by the former decrees, i. e., the central employment office and the office which had charge of the distribution of unemployment grants.

The local direction and supervision of the services coming under the administration of the National Office are to be exercised by newly established provincial employment and unemployment commissions (*giunte provinciali per il collocamento e la disoccupazione*), and supervisory commissioners. These commissions will supervise not only all the activities of the authorized employment offices, as was formerly the case, but also the offices which will be established for administering in their districts the provisions relating to unemployment insurance.

So far as the communal organizations for the placing of labor are concerned, the decree does not provide radical changes. In place of disbursing unemployment grants through these employment offices, however, there will be established in each Province an "office for insurance against unemployment," which will be administered by the provincial commission.

Agreements as to wage and working conditions having a general character for a specified labor market, industry, or occupation must through the prefects, mayors, and employers' and workers' organizations be deposited with the employment offices and the labor commissions.

Employers, inclusive of public administrations, who do not directly or through their own representatives hire labor required by them are obligated by the decree to have recourse to the authorized employment offices and must indicate the number of workers required, the

trade or occupation which these are to exercise, and the working and wage conditions offered.

The decree prohibits the operation of employment offices for gain and provides heavy fines for violators of this prohibition.

The placing of workers in employment involving their working in foreign countries is to be effected under the supervision of the Emigration Commission.

Financial Provisions.

Authority is granted in the decree for the inclusion in the budget of the Ministry of Industry, Commerce, and Labor of the sum of 50,000,000 lire (\$9,650,000, par), which may be used by the National Office for placing labor or for making advances to local bodies for combating unemployment.

In addition to the above, a permanent national fund will be provided for placing labor and combating unemployment, which will be made up of the balance remaining from funds already appropriated for this purpose, part of the contributions required in connection with the new compulsory unemployment insurance, and an annuity from the State, which is fixed at 40,000,000 lire (\$7,720,000, par) for the first three years.

Unemployment Insurance.

The decree provides for the establishment in each Province of a general unemployment insurance fund administered by the provincial employment and unemployment commission. Insurance against unemployment through occupational funds established by trade organizations or by agreement of employers and workers is also to be permissible.

Unemployment insurance is made compulsory for all manual workers of both sexes and for those salaried employees whose monthly earnings do not exceed 350 lire (\$67.55, par). All workers under 15 years or over 65 years of age, home workers, domestic servants, and persons permanently employed by public authorities, are exempted.

Beginning with January 1, 1920, the following contributions to the fund against unemployment have been required:

CONTRIBUTIONS PER WORKER TO UNEMPLOYMENT FUND.

[One lira at par equals 19.3 cents.]

Daily earnings.	Contribution.		
	Fortnightly	Weekly.	Daily.
4 lire and less.....	<i>Lire.</i> 0.70	<i>Lire.</i> 0.35	<i>Lire.</i> 0.06
Over 4 lire to 8 lire.....	1.40	.70	.12
Over 8 lire.....	2.10	1.05	.18

One-half of the contribution for each worker is to be paid by the employer and one-half by the worker himself. The employer is held responsible for the payment of the worker's share of the contribution. Unemployed workers are not required to make contributions during the period of their involuntary unemployment.

The new schedule of unemployment grants is a very simple one and is based entirely upon the earnings of the worker. In general it is somewhat higher than the schedule hitherto in effect. The daily grants will be as follows:

Daily earnings.	Daily unemployment benefit.
4 lire and less.....	1.25 lire.
Over 4 lire to 8 lire.....	2.50 lire.
Over 8 lire.....	3.75 lire.

The decree provides that in no case shall the daily unemployment benefit paid exceed one-half of the worker's daily wage.

The payment of the above unemployment benefit is to begin with the eighth day of unemployment, and its maximum duration within one calendar year is limited to 120 days. Unemployment benefits will not be paid for holidays.

The right to receive unemployment grants is confined exclusively to those who are involuntarily unemployed. Seasonal workers are not entitled to receive such grants during off seasons, though such workers may be granted unemployment benefits if they make higher contributions, the amount of which is to be determined in the by-laws of each fund. Unemployment due to labor disputes does not entitle to unemployment grants.

The disbursement of unemployment grants will as a rule be effected through the employment offices and other agencies authorized by the Ministry of Industry, Commerce, and Labor. The post offices may also be authorized to act as disbursing agencies. Occupational funds may through their own agencies effect the disbursing of unemployment grants, but in such case must adopt the rules laid down by the above ministry for a proper accounting.

An unemployed worker must present himself for registration at an employment office on the day following that on which he was discharged, unless he intends to procure work for himself directly, in which case he forfeits the right to receive an unemployment grant until he has presented himself for registration. In such a case he becomes entitled to an unemployment grant five days after his registration, provided that the seven days waiting time have elapsed. Private salaried employees must register with an employment office immediately after having received notice of discharge and without letting elapse the period of notice.

No unemployment grants will be allowed to unemployed workers for whose account at least 24 fortnightly payments, or the equivalent in weekly or daily contributions, have not been made during the two years preceding. When 24, but less than 36, fortnightly contributions have been paid, the worker is entitled to the receipt of an unemployment benefit for 90 days; and when 36 or more fortnightly contributions have been made he may receive the unemployment benefit for the maximum period of 120 days.

An unemployed worker who, without justifiable reasons, refuses suitable employment in his own or a related trade offered him by one of the employment offices, forfeits his right to receive an unemployment grant. Habitual loafers and drunkards are also excluded from the benefits of the decree.

Supervision and Penal Provisions.

The supervision of the application of the decree is to be exercised by the Ministry of Industry, Commerce, and Labor through its National Employment and Unemployment Office, which is authorized to have its officers make inspections of the provincial and trade unemployment funds and all other agencies established for the carrying out of the decree, as well as of the establishments in which persons subject to the decree are employed. Employers refusing to assist the inspectors in their investigations and to furnish data and papers requested by them are liable to a fine not to exceed 1,000 lire (\$193, par).

Employers who fail to make their own contributions and those of their employees and workers are liable to a fine equal to double the amount of the unpaid contributions, but not to exceed 10,000 lire (\$1,930, par), and in addition must pay the delinquent contributions. Persons trying to obtain unemployment grants fraudulently are to be deprived of the benefits of the decree for a period of one year and fined double the amount wrongfully secured by them, without prejudice to their further punishment in accordance with the criminal code.

A special decree of the Ministry of Industry, Commerce, and Labor is to establish rules for the control of actual unemployment, under which employers will keep the Government and the unemployment funds always informed as to the workers included in the insurance and their wages.

Construction of Public Works.

POSITIVE action will be taken by the State toward removing the causes of unemployment by undertaking the immediate construction of public works. The Ministry of Industry, Commerce,

and Labor recently announced that approval has been given to projects involving an expenditure of about 1,300,000,000 lire (\$250,-900,000, par), to be carried out within the next four years, which will include general reclamation work, road construction, post and inland waterway improvement, etc. The most important single line of activity will be that of railway construction, for which it is estimated that 400,000,000 lire (\$77,200,000, par), will be expended during the next four years.

Unemployment Statistics.

THE first issue of *Il Mercato del Lavoro* (The Labor Market), a bulletin published by the Italian National Employment and Unemployment Office, contains two tables showing the extent of unemployment in Italy at the end of each month during the period March to August, 1919, by districts and by industry groups. The table showing the state of unemployment by districts (*regioni*) indicates that unemployment was much more extensive in the northern districts, where most of the Italian industries are located, than in the central and southern districts, which have a pronounced agricultural character. The second table, showing the extent of unemployment by industry groups, is here reproduced:

UNEMPLOYMENT IN ITALY, MARCH TO AUGUST, 1919, BY INDUSTRY GROUPS.

Industry group.	Number of unemployed at the end of the following months of 1919:					
	March.	April.	May.	June.	July.	August.
Mining.....	2,019	3,201	4,592	4,903	3,824	5,734
Rural industries and agriculture.....	13,896	54,988	24,307	17,993	17,713	16,036
Manufacturing industries.....	77,327	92,714	86,036	88,317	89,931	73,958
Metallurgical industries.....	21,198	40,404	32,713	31,304	28,004	23,130
Chemical industries.....	74	556	545	387	1,127	365
Production of motive power, light, and heat.....	266	139	117	152	400	152
Printing industry.....	902	2,059	1,542	1,595	1,645	2,182
Building and road construction.....	131,113	138,913	175,983	168,972	135,071	133,747
Transportation.....	2,826	7,091	8,262	9,142	8,331	9,072
Miscellaneous.....	18,972	55,329	47,200	32,990	40,605	57,704
Total.....	268,593	395,394	1 375,297	1 356,165	1 326,451	322,080

¹ This is the total as shown in the original table; it is not the sum of the items.

According to the table unemployment during the six months ending August 31, 1919, was most extensive in April, the total number of unemployed in that month having been 395,394. In the next four months unemployment steadily decreased. Of all industry groups, building and road construction had the largest number of unemployed. In May, 1919, the unemployed in this industry group numbered 175,983, or approximately 47 per cent of the total number of unemployed. The manufacturing industries had the next largest number of unemployed.

The monthly disbursements of the Government for unemployment grants, February to October, 1919, were the following:

	<i>Lire.</i>		<i>Lire.</i>
February.....	9,795,000	July.....	17,061,600
March.....	8,095,000	August.....	9,803,000
April.....	9,590,000	September.....	9,165,000
May.....	16,733,000	October.....	11,075,000
June.....	15,570,000		

Social Insurance in Switzerland.¹

ACCORDING to a report recently issued by the Swiss Insurance Department there were 74 new insurance funds authorized by the Government during the year 1917. The number of authorized societies in operation at the close of the year was 777, in which 629,927 persons were insured.

The number of men, women, and children insured and the kind of insurance carried is shown in the following table:

NUMBER OF INSURANCE FUNDS IN SWITZERLAND AT THE END OF 1917, BY CLASS OF INSURANCE CARRIED, AND NUMBER OF PERSONS INSURED THEREIN.

Class of insurance carried.	Number of funds.	Number of persons insured.			
		Men.	Women.	Children.	Total.
Medical attention and medicines only.....	46	31,384	52,964	47,612	131,960
Medical attention, medicines, and unemployment benefits.....	478	173,232	88,824	18,089	280,145
Medical attention and medicines (less than provided by law) and unemployment benefits.....	10	7,564	576	.....	8,140
Unemployment benefits alone.....	243	166,859	42,823	.....	209,682
Total.....	777	379,039	185,187	65,701	629,927

These funds vary as to their composition. In some of them membership is limited to an occupation, a religious or political organization, or a business establishment, but in the majority of cases there are no such restrictions. They vary also in regard to the age and sex of persons eligible to membership.

The following table shows the number of men, women, and children in the various classes of funds:

NUMBER OF INSURANCE FUNDS IN SWITZERLAND AT THE END OF 1917, BY COMPOSITION OF FUND, AND NUMBER OF PERSONS INSURED THEREIN.

Composition of fund.	Number of funds.	Number of insured persons.			
		Men.	Women.	Children.	Total.
Children only.....	8	2,278	2,250	10,521	11,049
Men, women, and children.....	208	116,151	105,690	54,802	276,643
Women and children.....	1	.....	162	378	540
Men and women.....	478	221,264	77,504	.....	298,768
Women only.....	5	.....	1,581	.....	1,581
Men only.....	77	41,346	.....	.....	41,346
Total.....	777	379,039	185,187	65,701	629,927

¹ Rapport du Departement Suisse de l'Economie Publique, 1918.

² Insured before reaching 14 years of age, with a right to remain members of the fund until they reach the age of 20 years.

A Federal subsidy is paid annually per member, but not more than once for each member even though the member on whose account it is paid is insured in more than one fund. The membership upon which subsidies were based for the year 1917 was 311,508 men, 164,842 women, and 55,453 children, or 531,803 persons. This subsidy varies with the fund's compensation schemes—whether one or more kinds of compensation are paid, and the amount. The Federal subsidy to those paying only for medical attention and medicines varies from 3.5 to 4.5 francs (67.6 cents to 86.9 cents, par), for unemployment benefits alone from 3.5 to 4.5 francs, while those funds paying both kinds of benefits received from 5 to 5.5 francs (96.5 cents to \$1.06, par) per year per insured person. The subsidies paid in 1917 amounted to 2,399,852.5 francs (\$463,171.53, par). In addition to this the State paid 114,000 francs (\$22,002, par) as maternity benefits, and 87,200 francs (\$16,829.60, par) as benefits to mothers nursing their children.

Of funds in operation on January 1, 1917, the assets of 528 funds had increased 1,526,164 francs (\$294,549.65, par) and of 169 funds had decreased 223,963 francs (\$43,224.86, par) a net increase of 1,302,201 francs (\$251,324.79, par).

Provisions for Unemployment Relief in Switzerland.¹

FROM August 5, 1918, to April 5, 1919, five decrees of an emergency character were issued by the Swiss Federal Council, regulating the grant of assistance to unemployed workers. Two of these related to unemployment in private industry arising out of war conditions, the third to unemployment among workers employed by the Federal Government, the fourth to unemployment of Swiss subjects returning from abroad, while the fifth laid down conditions for the relief of all workers not covered by the preceding measures. These have now been repealed and replaced by a single decree dated October 29, which went into force on November 16, 1919, but which is still to be regarded as a provisional measure, to be replaced ultimately by an unemployment insurance law.

The main lines followed in the granting of unemployment relief, pending the enactment of such a law, may be stated as follows:

Assistance is granted both for total and for partial unemployment, subject to the fulfillment of conditions laid down in the decree. Such assistance is paid by the communal authorities in the former and by employers in the latter case.

¹ Reprinted from British Labor Gazette, Source: Recueil des Lois Suisse, Nov. 5 and 19, and Feuille Fédérale Suisse, Nov. 18, 1919.

The amount of relief granted in case of total unemployment is 60 per cent of the normal earnings, or 70 per cent where the person out of work has others legally dependent upon him; but the daily rate of pay must not in any case exceed certain maximums laid down in the decree. The maximum amount varies according to whether or not there are dependents and also according to the cost of living in the commune in which the unemployed worker resides.² Where short time is worked the relief paid by the employer is equal to half the loss of wage or salary.

Unemployment relief must not be paid, as a rule, for more than 60 working days in any one year.

The cost of relief is covered by grants from the Federal Government, the Cantons, and communes, and by contributions levied upon the employer, either by his trade association (should he belong to one), or by the government of the Canton in which his business is carried on. The share which an individual employer may be called upon to pay will be fixed by his association or by the cantonal authority as the case may be, and will be, (1) in respect of nonmanual workers, an amount which is not less than the total salary bill for half a month and not more than the total salary bill for three months, and (2) in respect of manual workers an amount which is not less than one week's wages bill and not more than the wages bill for six weeks. In computing the amount of the pay roll for the purpose of assessing an employer no account is taken of salary paid to a non-manual worker in excess of 500 francs (\$96.50, par) per month, or of wages to a manual worker in excess of 84 francs (\$16.71, par) per week.

Where the reduction of the working hours resulting in partial unemployment is 40 per cent or under, the cost of relief is borne entirely by the employers; if it is more than 40 per cent the employer will pay one-third of the cost of the relief provided.

Disputes are to be referred to the cantonal conciliation offices or to arbitration boards upon which these offices are represented. Unemployment relief under this decree is not to count as poor relief.

Special arrangements are made to cover the case of unemployment relief for aliens domiciled in Switzerland and for workers in seasonal trades.

The Federal Department of Public Economy is authorized to dispense with certain provisions of this decree in the case of certain classes of undertakings in which no unemployment exists or where there are organizations granting benefits equivalent to those conferred by the present measure.

² Communes are divided into three classes, viz.: "dear," "moderately dear," and "relatively cheap." In the second of these, for example, a person out of work may not receive more than 5 francs [96.5 cents, par] per day, or, if he has dependents, 7½, 8, 8½ or 9 francs [\$1.45, \$1.54, \$1.64, or \$1.74, par], according to their number, with an additional 50 centimes [9.7 cents, par], for each dependent in excess of four.

Regulations for the carrying out of the decree were issued on November 10. These show that an unemployment office is to be set up in each commune, and that where possible the duties of such office are to devolve upon the public employment exchange.

State Assistance for the Unemployed in Poland.

ACCORDING to the British Labor Gazette for February (p. 64), the Polish Official Gazette for November, 1919, contains the text of a temporary Government measure which provides the following immediate arrangements in aid of the unemployed pending the passing of a law dealing with this subject:

Able-bodied workers of either sex in trade, commerce, or transport who, through no fault of their own, are out of work, are entitled to State assistance, to be administered by the district unemployed assistance commission under the control of the Ministry of Labor and Public Welfare. One-half of the membership of the above commission will be composed of workers' representatives. The rate of daily assistance to be given varies according to the population of the locality. Where the population is less than 50,000 it will be 4 marks for the head of the family, with 2 marks for his wife (if she is not earning a separate wage), and 1 mark for each dependent child, the total not to exceed 10 marks a day; in places with 50,000 inhabitants or more and in all industrial centers the daily allowance is 5 marks for the head of the family, 3 marks for a worker's wife not earning money independently, and 1 mark for each dependent child, the total not exceeding 12 marks a day. This donation may be in kind. It is to begin within 14 days after the unemployed worker has been registered in the labor office, the maximum number of weekly donations in any one year being 13, though in exceptional cases it may be 17.

The donation will be forfeited if the applicant has ceased work for inadequate reasons; if he has obtained work for at least a fortnight; if he has made a false statement in his application; if he fails to comply with certain regulations; and finally, if he declines to accept work in establishments not affected by a strike or boycott, at trade-union rates, or at current local rates, when such work is offered to him by the labor office.

LABOR LAWS AND REGULATIONS.

Legislation as to Rehabilitation of Injured Workers.

By LINDLEY D. CLARK.

AN INDUSTRIAL result of the Great War was the maiming or otherwise disabling of large numbers of men drawn from the ranks of the workers of the country. To minify this loss, and to save the injured man from a life of dependence and consequent loss of self-respect, Congress, in common with other national legislatures, passed a law (June 27, 1918, 40 Stat. 617), entitled the Vocational Rehabilitation Act. (See MONTHLY LABOR REVIEW, July, 1918, p. 29.) The purpose of this act is to provide for the retraining of disabled persons discharged from the military or naval forces of the United States, and their "placement in suitable or gainful occupations."

The subject of equipping and retraining men injured in industry and disabled to pursue their former vocations had been discussed by those interested in social welfare for a number of years, and attention had been directed to the notable results attained in some European countries. However, it seemed to require a special impetus to secure public effort and action, and this the war has evidently afforded. First to act was the State of Massachusetts, which by a statute of 1918 (chap. 231, approved May 28) created a division in its industrial accident board, with the duty of training and instructing persons incapacitated for earning a livelihood through industrial accident.¹ The benefits of the act are limited to persons who were residents of the State at the time of becoming incapacitated.

A previous act (chap. 230), approved the same day, made corresponding provision for soldiers and sailors in the then current war disabled or diseased in the service. Both acts contemplate cooperation with the Federal Government in any way available and approved by the State agencies intrusted with carrying out their provisions. The machinery provided for in the first act is an advisory board consisting of the commissioner of education, the surgeon general, and others, ex officio, including the chairman of the industrial accident board, and nine other persons appointed by the governor.

¹ Other States taking similar action are California (chap. 183, May 2, 1919), Illinois (act of June 28, 1919), Minnesota (chap. 365, Apr. 23, 1919), Nevada (chap. 132, Mar. 28, 1919), New Jersey (chap. 74, Apr. 10, 1919), North Dakota (chap. 162, Mar. 5, 1919), Oregon (chap. 435, Mar. 4, 1919), Pennsylvania (No. 418, July 18, 1919), and Rhode Island (chap. 1737, Apr. 19, 1919), and Virginia (1920).

The enforcement of the industrial law is placed in the hands of the newly formed division of the industrial accident board without suggestion of methods or limitation on procedure, but it "may act in such manner as it may deem necessary to accomplish the purposes of the act." The division is charged not only with the duty of training the injured worker, but also with securing him employment.

Considerable variety is shown in the nature and scope of the various laws. Some of them are administered as a part of the workmen's compensation system of the State, and are in the hands of the State accident commission or board. Thus, in California where a fatal injury occurs and there is no surviving beneficiary the sum of \$350 is to be paid into an industrial rehabilitation fund. This fund is to be used by the industrial accident commission to promote vocational education and rehabilitation. An act (chap. 418) of this same legislature (1919) that may be mentioned in this connection appropriated \$8,500 for the treatment and rehabilitation of men rejected for military service during the war on account of physical defects.

In North Dakota the only provision made is contained in a section of the workmen's compensation act. The bureau in charge is to undertake "to restore to industry those injured in the course of employment." To this end it may assist the industrial cripples to obtain training, education, and employment, and may cooperate with the Federal Board for Vocational Education for this purpose.

The Oregon statute is somewhat broader than the foregoing, since it provides for the care and reconstruction of workmen injured in industrial pursuits, and also that the funds appropriated may be used "for such other purposes as may be deemed advisable by the commission." The work is intrusted to the industrial accident commission, which is authorized to set aside from the industrial accident fund the sum of \$400,000 to construct and equip an industrial and reconstruction hospital.

Liberal Provisions in New Jersey Law.

TO New Jersey must be given the credit of enacting the most liberal law of this type up to the date of its approval. The New Jersey act provides for a commission consisting of the commissioners of education, labor, and charities and corrections, with three nonsalaried commissioners appointed by the governor. One of these last is to represent employers, and one, organized labor. It is the duty of this commission to seek to train and qualify for remunerative employment every "disabled person in the State, resident therein for one year or more, whether his disqualification is due to accident, disease, or congenital defect." Excluded from the operations of the law are the aged and infirm, blind or deaf persons

under the care of the State, epileptics, feeble-minded persons, and those not susceptible to rehabilitation. The work is to be immediately in the hands of a director to be appointed by the commission, who shall himself employ the necessary staff and special assistants. Reports of disabled persons are to be obtained through public and private hospitals and from the commissioner of labor, who receives accident reports. Applications will also be received from persons desiring training, and a survey of the State is to be made to discover persons requiring assistance of this kind. Arrangements may be made with suitable institutions for the treatment of disabled persons, and they may be furnished artificial limbs and orthopedic appliances at cost and on easy payments. A school of rehabilitation is to be established in a principal city, with branches at other places thought necessary. Arrangements for suitable education and training may be made also with local school authorities and educational institutions, and with commercial, industrial, or agricultural establishments. Recipients of such training may be maintained during the period of training at an expense of not over \$10 per week for 20 weeks, though the length of time may be extended in the discretion of the commission. No person is to be trained against his or her will. Cooperation with the department of labor in the matter of placements and with the State or Federal Government or any private agencies for the carrying out of the purpose of the act is provided for.

The Illinois Legislature enacted in June, 1919, a law practically identical with the New Jersey law, while the Pennsylvania Assembly enacted similar legislation in July. The Illinois law provides for its administration by the department of public welfare, its scope and methods being practically as in the State of New Jersey. In Pennsylvania the law is intrusted to a bureau of rehabilitation to be created in the department of labor and industry, whose chief is charged with the duty of directing the rehabilitation of residents of Pennsylvania whose capacity to earn a living is in any way destroyed or impaired through industrial accidents in the State. The scope of the act is therefore much more limited than is the case in New Jersey and Illinois, but its methods of procedure are much the same as laid down in the New Jersey act; however, artificial limbs and appliances may be furnished gratis, and the maintenance fund may be as high as \$15 weekly, the law in these two points being more liberal than in New Jersey and Illinois.

In Minnesota ² the work of rehabilitation is intrusted to a division of the State board of vocational education. The beneficiaries are to be those whose capacity to earn a living has been impaired or destroyed

² An account of the Minnesota plan was published in the MONTHLY LABOR REVIEW for January, 1920 (pp. 184-189).

"through industrial accident or otherwise," and who are residents or citizens of Minnesota. Cooperation with the administration of the compensation act is authorized, as well as with Federal agencies. Courses of education and training may be established, or the board may cooperate with local boards of education in establishing and maintaining suitable courses, as may be deemed most expedient in carrying out the purposes of the act. The board is also to seek to obtain employment for the persons trained.

Quite similar to the foregoing are the provisions of the Rhode Island statute, in which the commissioner of public schools is authorized to make any industrial cripple resident in the State, injured in employment therein, and a fit subject for rehabilitation and education, a State beneficiary. Such person may be trained in any suitable school or institution at the expense of the State for not more than one year, though in approved cases this term may be extended. Artificial limbs may be furnished wholly or partly free of charge or at cost on installment payments.

The Nevada statute takes no initiative, but appropriates \$10,000 for the use of the State board of education in cooperating with any activity of the United States "for the promotion of vocational rehabilitation of persons disabled in industry or otherwise, and their return to safe employment." The instruction may be carried on within the State, or in other States with the approval of the governor in writing.

Rehabilitation Law of Virginia.

THE Legislature of Virginia at its session just closed enacted a law providing for the vocational training and rehabilitation of employees coming under the provisions of the State workmen's compensation act. The law applies to those whose capacity to earn a living has been destroyed or greatly impaired as a result of an industrial accident and who apply for the training contemplated. A condition is that the applicant must be without sufficient means to provide for his own rehabilitation, and preference is to be given to those whose disabilities are greatest and who were residents of the State at the time of the injury. If the commission thinks the applicant a fit subject for the training in view, he may be appointed a beneficiary at any suitable institution or school, either within or without the State, for a period of not more than one year; but if the institution especially recommends a longer period and the governor approves, an extension may be made not to exceed six months.

When an earning capacity equal to that prior to the injury has been regained no further compensation awards shall be paid except those under the schedule for specific injuries; and if more than 50 per cent of the average prior wage can be earned, a readjustment

shall be made, subject to the same limitation. The sum of \$10,000 is provided to carry out the act, to be taken from the surplus amounts standing to the credit of the administrative fund. If at any time these credits are not adequate, appropriations are to be made. The commission may accept gifts, etc., for this work and is authorized to cooperate with the Federal Government in any work of a similar nature.

No Federal statute on the subject is yet in being, though the Senate passed a bill, June 21, 1919, providing for cooperation with the States in the vocational rehabilitation of persons disabled in industries and otherwise. The House passed a similar measure October 17, 1919, which it sent to the Senate. The Senate committee to which it was referred proposed to amend the House bill by substituting the Senate measure for its provisions, and such action was taken on April 12, 1920, and a conference with the House requested.

It can not escape notice that there is considerable range in the liberality of the provisions of the various acts. The laws of California, North Dakota, and Oregon are closely tied up with the accident funds of their respective States, while in the first two States there is also a strict limitation to industrial injuries. In New Jersey and Illinois, on the other hand, a much broader problem is recognized, and a duty is assumed with regard to citizens and residents physically subnormal, regardless of the origin of their disability. Admitting the desirability and effectiveness of rehabilitation work for any group of citizens, it is difficult to discriminate against any other group likewise exposed to the possibility of becoming a public charge but capable of being made self-supporting and self-respecting. There is a commendable absence of limits to the discretion of the administrative authorities as to the methods to be pursued and the instrumentalities of which they may make use. The whole subject is in an experimental stage; but there are ample financial provisions in most States, and a variety of methods and conditions sufficient to afford a thorough test of the possibilities of such an undertaking.

Retirement Law for Railroad Employees in Argentina.¹

A LAW providing for a national retirement and pension fund for employees on Government-controlled railroads was passed in Argentina April 16, 1919, the various provisions of the law to become effective three months after its promulgation. This law, which superseded all previous laws, provided for a census of the

¹ Boletín del Instituto de Reformas Sociales, Madrid, August, 1919, pp. 243-247; September, 1919, pp. 338-345.

employees included in its provisions and for a mathematical study on an actuarial basis within the first three years of its going into effect for the purpose of making such modifications as might seem to be advisable.

Purpose and Beneficiaries.

THE employees subject to the operation of the law include all those employed on Government-owned railroads, including the posts now in existence or those which may be established, either by public or private enterprises, in the future, and also employees of the cable road from Chilecito to Mejicana, as well as employees of confectioners' shops operated by concessionaires of the railroads. The pensions also apply to persons who were discharged prior to January 1, 1913, except those discharged for certain specified causes such as drunkenness, dereliction of duty, crimes, etc., and to beneficiaries of deceased employees who prior to the same date would have been entitled to a pension. Employees or laborers engaged in temporary or casual work are not included. Six months' continuous service determines an employee as permanent.

Administration of the Fund.

A DIRECTORATE formed of a president appointed by the President and confirmed by the Senate, and three representatives each of the railroads and the employees, has charge of the administration of the fund. In case of a tie the president has the deciding vote. He also has charge of the execution of orders and is the legal representative of the committee, though he does not have the power of appointment or removal of other members. The directorate is required to determine annually the amount of the budget necessary for the following year and to submit the estimate to the President for approval.

Capital of the Fund.

THE revenue for the fund is derived from contributions of the employees and of the employers, from fines, from donations and legacies, and from the interest on accumulated capital. The employees are required to pay 5 per cent, deducted from their wages, on all earnings or wages up to 1,000 pesos (\$424.60, par) per month, to pay the amount of the first month's salary in 24 monthly installments when first employed by a railroad enterprise, and to pay the difference between the first month's pay and the higher pay when receiving an increase in wages. The employers are required to make a monthly contribution equal to 8 per cent of the salaries and daily wages provided that they do not exceed 1,000 pesos monthly. The excess of earnings above 1,000 pesos is not considered. The

railroads are required to make the discounts from the employees' wages and deposit them, together with their own contributions, each month in the National Bank of Argentina. The entire capital of the fund, except what is necessary for current expenses, is to be invested in national interest-bearing bonds or similar securities.

Amounts of Pensions.

THE pensions cover compulsory and voluntary retirement and invalidity. For compulsory retirement pensions are calculated on the average earnings of the last five years of service. Ninety-five per cent is allowed on earnings up to 100 pesos (\$42.46, par), 80 per cent on earnings between 100 and 300 pesos (\$42.46 and \$127.38, par), and 70 per cent on earnings between 300 and 1,000 pesos (\$127.38 and \$424.60, par). To receive this pension the employee must have completed 30 years of service and be at least 50 years old, and for an employee who has served 30 years but is between the ages of 45 and 50 the pension is reduced one-fourth.

Invalidity pensions are calculated on the average earnings of the last 10 years before retirement on the same scale as the ordinary retirement pension, less a reduction of 5 per cent for each year of service less than 30. This pension is paid to employees having at least 10 years' service to their credit, whatever the cause of disability, and to employees of less than that number of years' service if disability is incurred in the course of their employment.

Voluntary retirement is allowed to employees who have been employed more than 10 years and have reached the age of 50, at the rate of 2 per cent of the ordinary retirement pension for each year of service, and to those 50 years old having less than 10 years' service who wish to retire the amount paid in by them to the fund is returned with 5 per cent compound interest.

Employees who are discharged through no fault of their own receive the amount they have paid into the fund without interest. Such employees may be reinstated in membership in the fund within three years by payment of the sums previously withdrawn, although certain groups covered by a previous law lose this right in two years after the promulgation of the present law.

Those employees who have obtained the ordinary retirement pension may return to the railroad service and if again retired shall receive the pension formerly paid, while those retired for invalidity may be reemployed on easier work and shall receive pensions proportionate to their diminished earnings. If such employees complete the years of service which entitle them to ordinary retirement pensions, they will receive these pensions in addition to the invalidity pensions which are already being received.

If an employee, discharged for causes which forfeit the return of his contributions to the fund, has a family dependent upon him, the pension is to be paid to them.

Pensions are for life except for causes which lead to forfeiture, and for removal to another country, unless permission for such removal is obtained from Congress.

Pensions to Dependents; Special Provisions.

WHEN death occurs to an employee or laborer entitled to a pension, the persons dependent on such an employee, including the widow or the widower suffering from disability, the children, or in default of them the parents or the unmarried sisters of the principal, are entitled to receive one-half of the pension to which the principal was entitled, upon furnishing proof of the validity of their claims.

Employees of the railroads entitled to pensions prior to the date on which the compulsory discount became effective are subject to a discount of 10 per cent on their pensions until the fund shall have been reimbursed to the amount which the discounts on their salaries would have reached. This provision applies also to persons discharged prior to January 1, 1913, who had not forfeited their rights to a pension and to the heirs of persons eligible to a pension who had died before this date.

Arrangements are made for allowing persons formerly employed by private railroads to be given credit for such service in computing their service records for pensions. Provision is also made for supervision of reports of the railroad companies and for prompt payment by them of the sums required, with fines for failure to pay or delay in complying with these requirements. Power for enforcement of these provisions is vested in the president of the directorate of the fund.

Regulations Governing Application of Eight-Hour Law in Poland.

UNDER the provisions of the Polish eight-hour law of November 23, 1918, noted in the MONTHLY LABOR REVIEW for March, 1920 (p. 195), the minister of labor and public welfare is authorized to issue regulations pertaining to the enforcement of the law. Such regulations were published on January 9, 1920, and are summarized in the British Labor Gazette for February (p. 64), as follows:

The regulations limit working hours to 8 per day (on Saturdays to 6) or 46 per week. This limitation is to apply to persons employed in manufactories, mining, commerce,

communication and transport, and in other establishments where work is performed, even if such undertakings are not carried on for profit, or if they belong to the State. In mining the legal working hours are "from bank to bank." The rules of each mine must state clearly the order in which the arrival and departure of the men shall take place. The working hours of transport workers may be regulated by a special order, and in factories belonging to the State working hours may be rearranged by the competent minister, after he has consulted the trade organizations of employers and work-people, but the total hours worked must not exceed the legal number. Overtime is permitted to be worked in the following cases: (a) Where extra work is necessary in order to prevent damage, or for other similar reasons; (b) at times of seasonal pressure or at periods of stock taking; (c) in factories where continuous processes are carried on; and (d) in cases of national necessity.

For overtime not exceeding two hours payment is to be made at the rate of time and a half, for each hour in excess of two hours and for night work (i. e., between 9 p. m. and 4 a. m.) and work on Sundays and holidays the rate of pay is to be double. Work on Sundays is permitted only in public services, hotels, drug stores, etc., in theaters and the like, and in establishments carrying on continuous processes.

After every 6 hours of work, an hour's rest is to be granted, during which the machinery is to be stopped, and the worker permitted to leave his place of work. Where, owing to the nature of the work, this is not practicable, the worker is to be afforded an opportunity to take his meal while the machinery is running.

A temporary regulation provides that the introduction of shorter hours is not to cause a reduction of earnings where longer hours have hitherto been worked.

Nonobservance of the regulations is punishable by fine up to 5,000 Polish marks, or imprisonment for three months.

The regulations came into force four weeks after their publication.

Code of Labor Laws of Soviet Russia.

THE issue of "Soviet Russia," the official organ of the Russian Soviet Bureau located in New York City, dated February 21, 1920, reproduces a code of laws enacted for the regulation of labor under the Soviet Government. The code applies to all persons receiving remuneration for their work and is binding upon all enterprises, institutions, and establishments, public or private, as well as private employers. Cooperative workers, workers in communal enterprises, farmers, and independent artisans are subject to other forms of regulation.

Labor Compulsory.—The first article of the code relates to compulsory labor. All citizens of the republic are subject to compulsory labor except those under 16 and over 50 years of age, and those who have become incapacitated by injury or illness. Temporary exemptions are made in case of persons temporarily disabled and of women for eight weeks before and eight weeks after childbirth. Questions of permanent and temporary disability require medical certification.

Labor may be rendered in the form of organized cooperation, individual personal service, or individual special jobs.

The conditions of labor are to be regulated by rules drawn up by the trade-unions in agreement with the directors or owners of establishments or enterprises, and approved by the People's Commissariat of Labor. Individual personal service or special jobs are subject to trade-union rules to be approved by the commissariat.

Right to Employment.—The second article declares that all citizens able to work have the right to employment at their vocations and for remuneration fixed for such classes of work. This right belongs first to workers subject to compulsory labor. Persons over 50 come next, while persons under 16, those incapacitated by injury or illness, and women given vacations on account of childbirth are barred. No female and no male under 18 shall have the right to work at night or at especially hard or dangerous occupations.

Labor Distribution.—Article 3 takes up the subject of the methods of labor distribution. Departments of labor distribution, trade-unions, and all institutions of the Republic are to cooperate in enforcing the right to work; while the assignment of wage earners to work is to be carried out through the departments of labor distribution. Only these departments may summon a wage earner to work unless he be chosen for a position by a Soviet institution or enterprise. A system of election is provided where special qualifications are required.

Unemployed wage earners are required to register in the local department of labor distribution to which application is to be made by those in need of workers. Persons meeting the requirements of the employment shall be assigned to work, and may not refuse the same if the working conditions conform to the standard fixed by the proper authorities. If the local list does not contain a suitable supply of workers, application must be made to the district bureau, and if this is found deficient, workmen of a class most nearly approaching the requirements of the trade may be sent, upon agreement with the proper trade-union. A workman offered work outside of his vocation is obliged to accept it on the understanding, if he so wishes, that it is only temporary until he can secure work at his vocation. If the employment is outside the district of the worker's residence, the number shall be made up from volunteers, if possible; otherwise, unemployed workers shall be assigned in the order of their registration.

Probation Periods.—Acceptance for permanent employment requires a period of probation of not more than six days, though in Soviet institutions the probation period shall be two weeks for unskilled and less responsible work, and one month for skilled and responsible work. Report is to be made to the department of labor distribution as to the acceptance or rejection of the worker, who retains his place on the list of unemployed until the expiration of the probation

period. A rejected worker may appeal to the trade-union of which he is a member, which may then negotiate with the employer. If the negotiations fail, the matter shall be submitted to the local department of labor, which makes a final decision. If the rejection seems to the department to have been without sufficient reason, the employer must furnish the workman with work, and may also be required to pay for time lost.

Transfer and Discharge of Wage Earners.—Article 5 relates to the transfer and discharge of wage earners. Transfers may be made only by decision of the proper organs of management, and if it involves a shift to another enterprise or establishment, the consent of the department of labor distribution must be obtained. Appeals may be taken to the district department of labor or to the People's Commissariat of Labor whose decision is final. These last-named agencies may, in agreement with the respective professional unions, transfer a whole group of wage earners in cases of urgent public work, either in the same or a different locality, if a sufficient number of volunteers can not be found.

Discharges may take place only in case employers go out of business or certain orders of work are canceled, or if work is suspended for more than a month, or in case of the completion of a temporary contract, or where there is an evident unfitness for the work as determined upon by the organs of management in agreement with the proper union, or, finally, by request of the wage earner. Two weeks' notice is required, except in cases of termination of temporary employment or where the wage earners request release. Appeals may be taken in case of discharge, first to the local department of labor and, finally, to the district department, whose decision is final. Discharges by request of the wage earner must be passed upon by the proper works or other committee representing the workmen's self-government system. If these find the resignation unjustified, the worker must remain at work, but may appeal to his union.

Remuneration of Labor.—The remuneration of labor is considered in article 6. It is directed that remuneration of all paid labor and the detailed conditions and order of payment shall be fixed by tariffs worked out for each kind of labor by the Soviet authorities, the trade-union, and the People's Commissariat, in agreement with the directors and owners of establishments and enterprises. The standard shall at least cover the minimum living expenses as determined for each district by the People's Commissariat of Labor. The character of the labor, its dangers, complexity, the degree of independence and responsibility involved, as well as standard of education and experience required, shall be considered in fixing wages. The daily rate shall be the standard, and piecework shall be compensated according

to the number of pieces determined to constitute the production standard. Overtime work shall be remunerated at a rate not exceeding time and a half, and, excepting such excess, no additional pay above the standard fixed shall be permitted in any form or under any pretext. Payments for steady work must be made periodically, at least once in every fortnight, and no payment may be made in advance. Payments in kind may be made only on special permission. Wages must be paid during working hours, at the place of work, and only for actual work done. The payment of wages is continued during leaves of absence, illness, and unemployment; but in the two latter cases payment is made from special funds.

Hours of Labor.—Working hours are regulated by the same bodies as those fixing wages. Eight hours is the maximum for a normal working day, and seven hours for night work. Persons under 18, and those employed at specially difficult or dangerous employment, may not work more than six hours per day. As a general rule, overtime work shall not be permitted, and in no case shall females or males under 18 do overtime work. An uninterrupted rest of 42 hours must be allowed each week, and, if the working day exceeds six hours, it shall be reduced by two on the day preceding rest days. Workers who have been engaged without interruption for not less than six months shall be allowed two weeks' leave with pay, and if for one year, one month's leave with pay. A wage earner shall not be allowed to work for remuneration during his leave of absence.

Efficiency of Labor.—The eighth article establishes methods to assure efficiency of labor. A standard output for normal working conditions is required of all workers, this standard to be determined by commissions of the representative trade-unions and approved by the proper department of labor jointly with the Council of National Economy. A worker falling below the standard may be reduced to a lower group at a lower rate of wages; or, if his failure is due to lack of good faith and negligence, he may be discharged without the prescribed two weeks' notice. Rules of internal management must also be drawn up by the Soviet authority for Soviet institutions, and by the trade-unions for other undertakings, to be approved by State authorities in both cases.

Safety Regulations.—The concluding article considers safety regulations. The protection of life and health lies with technical inspectors and the representatives of sanitary inspection. Labor inspectors are to be elected by the councils of professional unions, and are under the jurisdiction of the People's Commissariat of Labor and its local branches (departments of labor). The inspectors have full authority to enter establishments and all buildings provided for the workmen, to examine books, and to secure cooperation of representatives of

both employers and employees. They are to enforce the provisions of this code and all orders, instructions, etc., of the Soviet Bureau intended to safeguard the life and health of the workers. They may also adopt special measures to meet special dangerous conditions.

Appendixes.—Appendixes provide rules concerning the unemployed and the payment of subsidies, concerning labor booklets, and for the determination of disabilities for work. Unemployed persons are to receive the remuneration paid to their class under the findings of the authorities, but must submit evidence as to their status, and the extent and causes of their unemployment must be ascertained through the department of labor distribution. Payments are to be made from an unemployment insurance fund levied on all enterprises employing paid labor, including fines imposed for default in the payment of such levies, and any casual amounts accruing.

Every citizen of the Republic on being assigned to his labor group and category is to receive a labor booklet or pass book, a copy of which is also to be kept by his employer. This book must be presented to his employer on entering any employment, and all payments, fines, absences, etc., must be entered therein. This book must be held open to inspection of the authorities as well as of his employer and his trade-union.

Disability for work shall be determined by a bureau of medical experts in urban districts; or by provincial insurance offices, accident insurance offices, and institutions acting as such. Surgeons, officials, mechanical engineers, and trade-unions are to be represented on the staff of the bureau of experts. Reexaminations may be had to determine changes of conditions. Sick benefits shall be the same as the wages payable to the group to which the wage earners belong. Payments are to be made from hospital funds sustained by enterprises employing paid labor.

The absolutely dominating nature of these regulations is shown by the following preliminary article:

IV. All labor agreements previously entered into, as well as all those which will be entered into in the future, in so far as they contradict the regulations of this code, shall not be considered valid or obligatory, either for the employees or the employers.

HOUSING.

Company Housing in the Bituminous Coal Fields.

By LEIFUR MAGNUSSON.

IN THE latter part of 1916 the Bureau of Labor Statistics completed a comprehensive survey of housing by employers in the United States. This investigation comprised communities maintained by coal mining companies in Western Pennsylvania, West Virginia, Ohio, Indiana, Kentucky, Tennessee, Alabama, Colorado, and Wyoming, and included almost exclusively the better types of communities. Certain facts stand out as a result of this study:

1. The responsibility for the housing of a large proportion of the miners has been undertaken by the mine operators. The isolation of the average mining town, its dependence upon the one industry of mining, and frequently its impermanence and almost universal lack of local self-government, as well as the shifting character of the labor force, have compelled the mine owner to assume that responsibility.

2. The average company mining town has few of the amenities of ordinary community life. There is a dull uniformity in the appearance of the houses and an absence of trees and natural vegetation. Streets and alleys are open dirt roads almost without exception. Sidewalks are very rare.

3. The miner's house is without the ordinary inside conveniences found in the house of the city worker. Less than 2 per cent of the homes in the bituminous coal regions have inside toilets, and running water is rare. Stoves and grates are depended upon for heating.

4. The average house of the miner includes about four rooms, in which he must accommodate a family and frequently take in boarders when there is a housing shortage.

5. The rents of the miners' houses are comparatively low, most of them (12,343 out of 18,877, or 65.4 per cent) renting in 1916 for less than \$8 per month. The rent in some instances probably constitutes a subsidy to the wages of the miner who lives in a company house. (What proportion of all bituminous coal miners live in company houses is not known.)

Scope of Survey.

THE survey was in no sense a census of the coal companies with respect to their practice in housing their employees. Observation, however, convinced the investigator that the practice of company housing was very widespread and uniform among the coal-mining companies.

The scope of the survey in the bituminous-coal region is indicated in Table 1.

TABLE 1.—SCOPE OF THE HOUSING INVESTIGATION IN THE BITUMINOUS COAL FIELDS.

District.	Number of companies.	Number of communities.	Number of employees.	Number of employees housed.	Per cent of employees housed.
Pennsylvania and West Virginia.....	32	¹ 114	78,218	43,877	56.1
Ohio and Indiana.....	3	⁴	1,287	688	53.5
Alabama.....	24	29	² 18,694	² 15,035	80.4
Colorado and Wyoming.....	5	16	4,644	3,148	67.8
Total.....	64	163	102,843	62,748	61.0

¹ 1 company did not report number of establishments.

² Not including 1 company with 500 employees; number housed was not reported.

Layout of Towns and Surroundings of the Houses.

THE chief characteristic of every company mining town is its uniformity, due to a tendency to erect houses of similar plan and type and to arrange them along rectangular lines of survey. Another feature of the mining town has been its disregard of the advantages of planting trees, grass, and shrubbery as beautifying elements.

On the other hand, the mining town is characterized by relatively wide streets and ample lots. The streets are usually unpaved, open dirt roads. Sidewalks are extremely infrequent and only in the better parts of the community is there evidence of fenced and grassed courts.

The desirability of locating the houses near to the mines has frequently been secured at the sacrifice of conditions of health and comfort; thus in the coking region the houses are found placed on neighboring hillsides which have been rendered barren by the noxious gases of the beehive ovens. Frequently the towns were found placed not only immediately adjoining the ovens, but with no consideration as to the prevailing winds in the region. With the prevailing winds from the west, houses to the east would be constantly enveloped in smoke. Consequently conditions of dreariness and desolation were quite common in the region. On the other hand, some operators pointed out that because of improved means of communication nearness to the mines is not as essential now as it was formerly. This is particularly true in the bituminous region of Pennsylvania, where the district is fairly closely settled. Workers in the bituminous coal region of Pennsylvania commute from neighboring cities as far

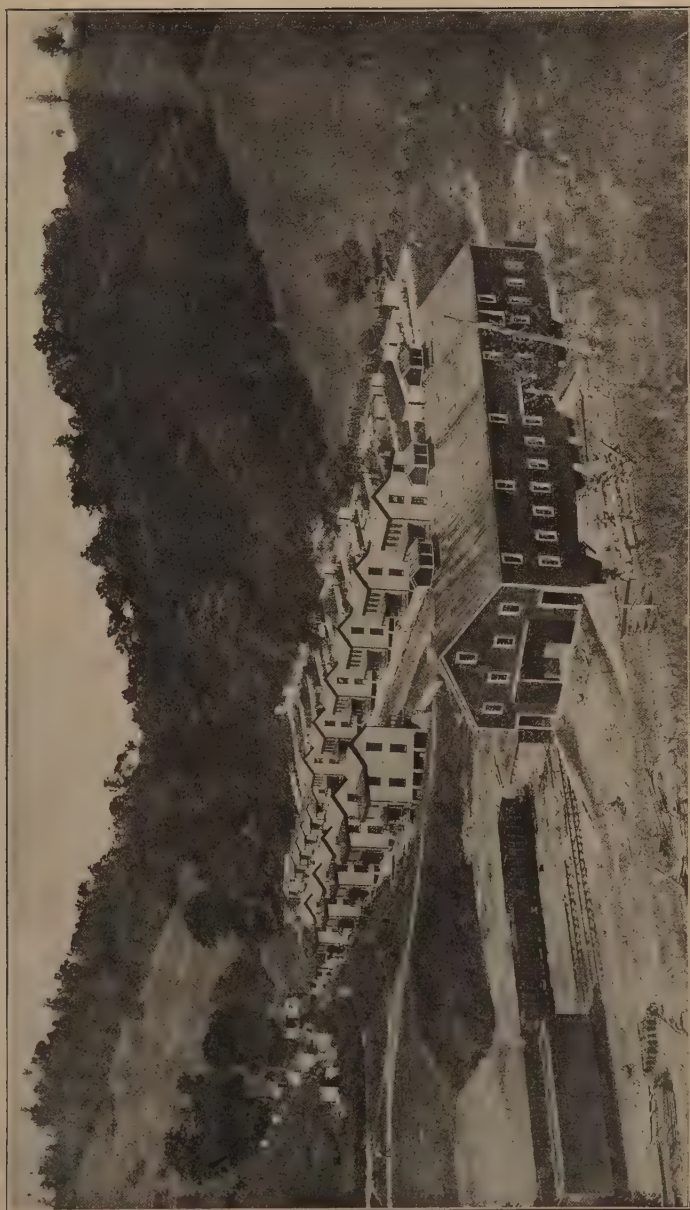


FIG. 1.—One of the better maintained coal towns in West Virginia.



FIG. 2.—A desolate section of a Pennsylvania coke town.



FIG. 3.—Better section of the same town.

as 7 miles away. Isolated "patches" in the region still exist by reason of pure inertia, as one of the more far-seeing managers remarked. It is unfortunate that the scattered locations of formerly individually owned mines were not consolidated into a single town with developed community life at the same time that the mines came under a single corporation control.

Age of the Houses.

WHILE three-fifths (8,024, or 61 per cent of a total of 13,158 reported) of the dwellings in the bituminous coal regions were erected between the years 1901 and 1910, a few houses may be found still in use which were erected before 1881. The type or style of house used in the bituminous coal region of western Pennsylvania has changed very little from what it was in the early days of coal mining.

Type, Construction, and Size of Houses.¹

THERE are two prevailing types of houses found in the bituminous coal regions, the single or detached house and the double or semidetached house, though a few row houses are found in the Pennsylvania and West Virginia and the Colorado and Wyoming districts.

The prevailing plan of house in the Birmingham district is a hip-roofed cottage about 28 feet square with a chimney in the center of the roof, a front porch running the full length of the house, and a small porch at the rear. The houses are generally raised from the ground by brick piers 4 or 5 feet high, the area under the house being usually uninclosed. In the Tennessee and Kentucky coal fields small gable-roof cottages prevail. These, too, are generally without cellars; front and rear porches are common.

A type of house more or less peculiar to all small southern towns is the so-called "shotgun" house, shaped like an oblong box and divided into three rooms in a row and frequently with the doors connecting the rooms in alignment.

An interesting, though perhaps undesirable, arrangement was noted in one of several camps of a company in the Colorado district, whereby two three-room semidetached houses can be made three dwellings. The front porch has no partition, but the back porches are separate. The front rooms of the two houses are connected by a door. In the event of its being necessary to house three families in the building, one family will be given these two front rooms and the front porch, and the others will each have a middle and a back room and a back porch.

¹ In addition to the illustrations here shown, illustrations of types of houses and communities in the bituminous regions of western Pennsylvania and Ohio and in the Birmingham (Ala.) district may be seen in the November, 1917, issue of the MONTHLY LABOR REVIEW following page 56.

Most of the company houses are of wood, the exterior being clapboard, weatherboard, or siding. Some of the old-fashioned board and batten houses consisting of only one thickness of board were still in use in some of the more isolated communities. In the ordinary miner's house in the Pennsylvania and West Virginia region there is no undersheathing, the clapboard being laid directly on the framing. In the Colorado and Wyoming district the large company studied reported that of the houses in its 12 camps about 74 per cent are frame (5 out of 6 being weatherboarded), about 10 per cent plain cement blocks, and about 17 per cent pebble-dash finish. The monotony of the gray cement or pebble-dash is pleasantly relieved by roofs of contrasting and varied colors.

Though a considerable number of the houses of the miners are plastered, an equally large number are ceiled inside with so-called tongue-and-groove material, often left unstained. If they are papered it is usually at the expense of the tenant. The inside wood finish is of pine and usually painted. Almost without exception the houses of the Pennsylvania and West Virginia and of the Ohio and Indiana regions are heated by stoves or grates. In the former district, better-class houses for superintendents and foremen are plastered and papered, and very frequently furnace heated or heated by steam from the company plant.

A feature of the mining towns, particularly of the Pennsylvania and West Virginia and Alabama districts, is the monotony of color in the painting of the houses, all of the dwellings in many towns being exactly alike in this respect. Often, too, they need paint badly. Some rather quaint whitewashed cottages are found in the mining towns of Tennessee.

Size of Dwellings.

CONSIDERABLE variations exist as between the different industry groups and the different sections of the country. The prevailing size of dwelling for a family in the Pennsylvania and West Virginia bituminous coal region is either three or four rooms; in the Ohio and Indiana coal region, four rooms; in Alabama, Tennessee, and Kentucky, three or four rooms; and in the coal towns of Colorado and Wyoming, four rooms. A considerable proportion of two-room houses is found in the bituminous coal regions of Alabama, Tennessee, and Kentucky. In the anthracite coal region the typical company house is of five or six rooms.

The per cent of company houses in the soft-coal fields having each specified number of rooms per dwelling is shown in Table 2. For purpose of comparison similar information covering other mining districts is also given.



FIG. 4.—An old-style board and batten 3-room miner's cottage still in use in an isolated mining town of Pennsylvania.



FIG. 5.—Improved alley in coal and coke town in western Pennsylvania. Note drainage gutter with garbage receptacles over it.

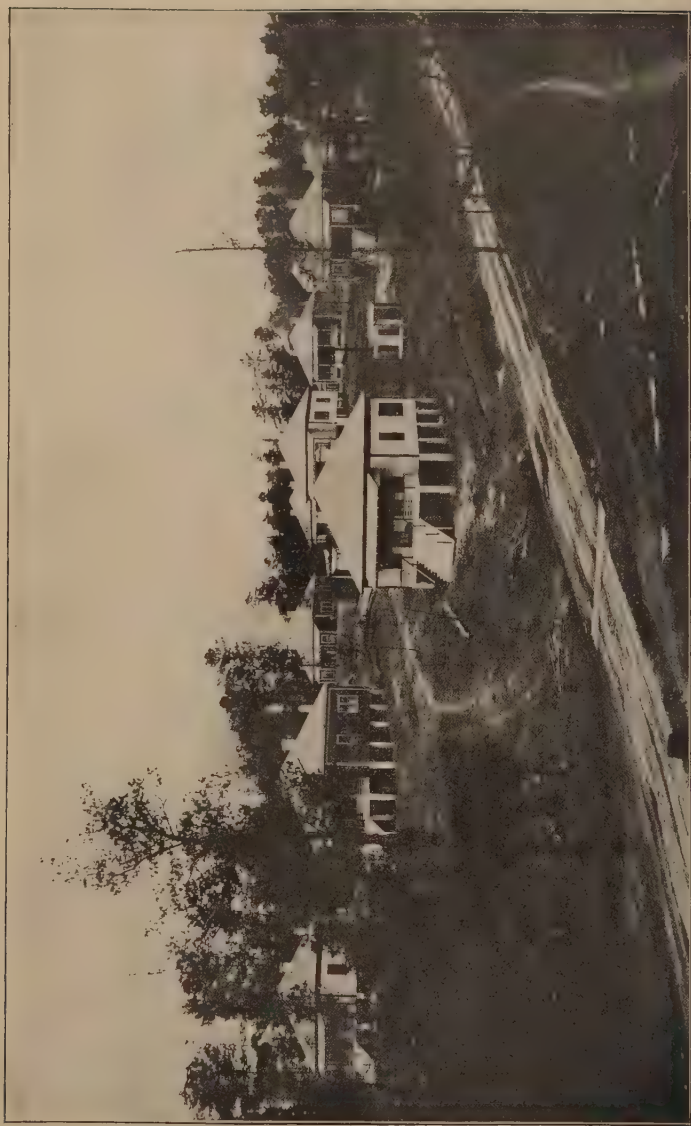


FIG. 6.—New coal mining camp, Birmingham (Ala.) district, constructed in 1916. Houses built before grading and laying of streets. All cottages of similar plan and adapted for conversion into double houses. Used as 1-family 4-room houses. Running water in kitchen; electric light. Coiled inside; composition roof.

TABLE 2.—PER CENT OF COMPANY DWELLINGS HAVING SPECIFIED NUMBER OF ROOMS PER DWELLING, BY INDUSTRY AND DISTRICT.

Industry and district.	Total number of dwellings.	Per cent of dwellings having—						Total.
		3 rooms and less.	4 rooms.	5 rooms.	6 rooms.	7 rooms.	8 rooms and over.	
Bituminous-coal mining:								
Pennsylvania and West Virginia.....	11,711	35.5	25.4	21.9	15.1	1.0	1.2	100.0
Ohio and Indiana.....	235	12.8	78.3	6.0	3.0			100.0
Alabama.....	5,698	47.0	40.2	7.8	3.9	.3	.8	100.0
Colorado and Wyoming.....	1,234	21.7	64.3	5.6	7.8	.5	.1	100.0
Total.....	18,878	37.8	33.0	16.4	11.1	.8	.9	100.0
Anthracite-coal mining.....	5,320	5.3	17.3	30.2	32.4	9.0	5.8	100.0
Iron mining:								
Michigan, Wisconsin, and Minnesota.....	1,071	.7	20.8	38.7	18.3	8.6	12.9	100.0
Alabama.....	361	70.9	22.4	3.3	3.0	.3		100.0
Total.....	1,432	18.3	21.2	29.9	14.4	6.5	9.7	100.0
Copper mining: Michigan and Tennessee.....	908	1.4	28.9	34.9	15.7	2.9	16.2	100.0
Other copper and gold mining: Arizona, New Mexico, and Colorado.....	642	65.9	26.6	5.5	2.0			100.0
Total.....	1,550	28.1	27.9	22.7	10.1	1.7	9.4	100.0

Sanitary Conveniences.

SANITARY conveniences are rarely found in mining towns. Thus in the soft-coal regions, only 312 dwellings, or 1.9 per cent of the 16,896 reported, have inside toilets, while 16,584, or 98.1 per cent, have outside toilets. In the more thickly settled anthracite region 19.5 per cent have inside toilets and 80.5 per cent outside. More detailed figures for the various regions are shown in Table 3. Here, again, certain other large mining industries are included for purposes of comparison.

TABLE 3.—NUMBER AND PER CENT OF COMPANY DWELLINGS HAVING INSIDE AND OUTSIDE TOILETS, BY INDUSTRY AND DISTRICT.

Industry and district.	Total number of dwellings.	Inside toilets.		Outside toilets.	
		Num-ber.	Per cent.	Num-ber.	Per cent.
Bituminous-coal mining:					
Pennsylvania and West Virginia.....	10,119	254	2.5	9,865	97.5
Ohio and Indiana.....	235	3	1.3	232	98.7
Alabama.....	5,328	55	1.0	5,273	99.0
Colorado and Wyoming.....	1,214			1,214	100.0
Total.....	16,896	312	1.9	16,584	98.1
Anthracite-coal mining.....	4,034	785	19.5	3,249	80.5
Iron mining:					
Michigan, Wisconsin, and Minnesota.....	1,057	169	16.0	888	84.0
Alabama.....	524	20	3.8	504	96.2
Total.....	1,581	189	12.0	1,392	88.0
Copper mining: Michigan and Tennessee.....	908	296	32.6	612	67.4
Other copper and gold mining: Arizona, Colorado, and New Mexico.....	642	289	45.0	353	55.0
Total.....	1,550	585	37.7	965	62.3

Maintenance of Company Houses.

THERE is an absence of careful maintenance in company controlled mining towns, except in a few striking instances. There was no garbage collection or provision made for garbage disposal in 13 of 53 communities. Ten companies reported collecting garbage in the community bimonthly or less frequently.

Where only outside sanitation was provided the prevailing type of privy was the open-vault kind. In one of the towns of the Birmingham district, operated by one of the largest companies in the region, the can type of privy has been adopted quite generally. This company also protects its outhouses by screening and disposes of the contents by a system of water decomposition.

In the coal-mining region of Pennsylvania, both bituminous and anthracite, the old-fashioned method of scavenging prevails. Only in rare instances, however, was the practice reported of moving the privies from place to place as the vaults became full.

Condition of yards and premises.—The condition of yards and houses in company towns differs so markedly in the same locality and among the same class of employees that it seems reasonable to conclude that the differences are due to the care and attention given the matter by the company; so that bad conditions, as has been frequently asserted, can not be attributed to the tendency of the workmen to keep their yards in an unsightly condition. Generally speaking, where the company observes system in keeping streets and alleys clean and in repairing houses and has a regular man or corps of men to do that work, yards, too, as a whole, are observed to be in better condition of upkeep. Another factor in the case is the provision by the employer of rubbish and garbage cans for the use of the tenants. It is the experience of the general superintendent of one of the largest coal and coke companies in western Pennsylvania that once the company provides an adequate house and sightly premises the employees, and particularly the wives of employees, take a new interest in the house and its maintenance. Continuance of the improvements is desired, even demanded. A standard of comfort and decency of surroundings has been created, and a desire for its continuance persists. The employer is in an advantageous position to secure and maintain that standard of comfort and decency in surroundings of his tenants because his regulations in that respect are backed by the authority to discharge from employment. On the other hand, there is at times a tendency on the part of the employer to connive at unsightly premises and to be careless in regard to enforcing rules whenever there is a shortage or difficulty in securing labor. This would seem to be a short-sighted policy, since in the long run the reputation of a



FIG. 7.—Miner's cottage in an Ohio town. Four rooms; rent \$10 per month. Cost in 1912, \$675. Electric lights, but no modern sanitary improvements. Better than the average.



FIG. 8.—Western mining town with rudimentary drainage system.

company town for cleanliness, sightliness, and availability of recreational features is bound to attract labor, if one may rely on the opinions of those closest to the situation.

On the side of the employee it may be observed there is frequently a reluctance to make any demands for proper maintenance and improvements in the house, particularly when labor is plentiful and competition for jobs is keen, because of the inevitable control which the employer has over the employee by reason of owning the house and holding over him the threat of eviction.

Rents of Company Houses.

ALMOST without exception all houses are rented and not sold by the mining companies. It is not deemed advisable to sell houses, inasmuch as the coal mining properties are more or less temporary in their nature, mines tending to run out after a period of years. The rents here given are those of 1916. There may have been increases since then.

Pennsylvania and West Virginia.—The rent of the miner's house in the Pennsylvania and West Virginia region is generally from \$1 to \$2.50 a month per room. This rent also includes water in the case of 27 companies out of the 32 included in the survey of this region. Two companies include light also and three coal also as a part of the house rental.

Alabama district.—The rentals of company dwellings in the Alabama district appear to be moderate. Out of 5,698 dwellings, 1,652, or 29 per cent, rent for \$6 and under \$7 a month, and 4,244, or 74.5 per cent, rent for less than \$7 a month.

Colorado and Wyoming.—Of the 1,234 houses for which complete information was received, 78.5 per cent rent at less than \$9 a month and 20.9 per cent at less than \$7. Three-fourths of the houses rent for between \$2 and \$2.50 per month per room. It would appear that no higher rents are charged for the new than for the older houses. In the large company investigated, it may be observed, rents are established by the industrial agreement between employer and employed.

Generally rent includes only house and water. In all of the 12 camps under one control it includes also the use of an electric light on the front porch, since this is the only means of lighting the streets. In three of these 12 camps the use of water is charged for, owing to its scarcity; of the four independent camps it is charged for in two cases, in one of them at the rate of \$2 a month per house.

Three of the four independent companies report the charge for electric lights; in one this is 35 cents a light per month, in another 50 cents, and in the third \$1.50 to \$3 a house, according to power supplied. The company controlling 12 camps charges 25 cents a

light per month, not including the one on the porch. In a camp in Wyoming the charge is \$1 a month for the first light and 75 cents each for the others.

Table 4 summarizes the available information respecting the rents of company-owned houses in the bituminous-coal region. Rents for company houses in other mining communities are shown for comparative purposes.

TABLE 4.—PER CENT OF COMPANY DWELLINGS RENTING AT SPECIFIED AMOUNT PER MONTH, BY INDUSTRY AND DISTRICT.

Industry and district.	Total number of dwellings.	Per cent of dwellings renting at each classified amount per month.										Total.
		Under \$5.	\$5 and under \$6.	\$6 and under \$7.	\$7 and under \$8.	\$8 and under \$9.	\$9 and under \$10.	\$10 and under \$14.	\$14 and under \$18.	\$18 and over.		
Bituminous-coal mining:												
Pennsylvania and West Virginia....	11,710	4.2	10.3	17.4	28.8	22.0	6.4	9.1	1.5	0.2	100.0	
Ohio and Indiana.....	235			4.3		48.5	19.6	26.4	1.3		100.0	
Alabama.....	5,698	29.6	15.9	29.0	11.6	6.2	3.2	4.0	.4	.1	100.0	
Colorado and Wyoming.....	1,234	2.8	5.3	12.8	5.2	52.4	.8	19.3	1.3		100.0	
Total.....	18,877	11.7	11.5	20.5	21.7	19.5	5.3	8.6	1.1	.1	109.0	
Anthracite-coal mining.....	6,827	35.4	19.1	18.5	10.9	7.5	2.3	4.5	1.1	.4	100.0	
Iron mining:												
Michigan, Wisconsin, and Minnesota.	1,077	9.2	19.3	16.9	11.4	15.7	3.2	22.1	1.6	.6	100.0	
Alabama.....	524	59.9	26.9	8.4	2.3	.6	.4	1.5			100.0	
Total.....	1,601	25.7	21.8	14.1	8.4	10.7	2.3	15.3	1.1	.4	100.0	
Copper mining: Michigan and Tennessee.....	904	4.7	30.4	22.5	16.4	8.2	7.4	5.2	4.6	.7	100.0	
Other copper and gold mining: Arizona, New Mexico, and Colorado.....	612		11.4	17.2		10.8	8.7	28.6	9.1	14.2	100.0	
Total.....	1,516	2.8	22.8	20.3	9.8	9.2	7.9	14.6	6.4	6.1	100.0	

LABOR ORGANIZATIONS.

Membership of Trade-Unions in Great Britain in 1918.

STATISTICS have recently been compiled by the British Ministry of Labor and published in the Labor Gazette for January, 1920, showing membership of trade-unions in Great Britain in 1918. The number of unions and the membership in 1918 (subject to revision) as compared with 1917 are shown in the following table:

MEMBERSHIP OF TRADE-UNIONS IN GREAT BRITAIN IN 1917 AND 1918, SHOWING PER CENT OF INCREASE IN 1918.

Groups of trades.	Number of unions at end of 1918.	Membership ¹ at end of—		Per cent of increase in membership, 1918 over 1917.
		1917.	1918.	
Building:				
Carpenters and joiners.....	2	114,000	137,000	20
Builders' laborers ²	10	38,000	62,000	63
Others.....	49	106,000	122,000	16
Mining and quarrying:				
Coal mining.....	90	917,000	964,000	5
Other mining and quarrying.....	10	30,000	31,000	2
Metal, engineering and shipbuilding:				
Iron and steel manufacture.....	13	118,000	130,000	10
Ironfounding, engineering and shipbuilding.....	84	674,000	760,000	13
Other.....	65	56,000	61,000	10
Textile:				
Cotton.....	147	382,000	401,000	5
Other textile.....	92	162,000	204,000	26
Textile printing, dyeing, warehousing, etc.....	34	86,000	89,000	3
Clothing:				
Boot and shoe.....	12	81,000	91,000	13
Tailoring and other clothing.....	23	78,000	120,000	54
Transport:				
Railway.....	11	499,000	530,000	6
Tramway and other road transport.....	16	111,000	144,000	29
Dock, canal and riverside labor, and seafaring.....	38	280,000	313,000	12
Agriculture and fishing ³	15	56,000	129,000	131
Printing, paper, and allied trades.....	32	112,000	142,000	26
Woodworking and furnishing trades.....	69	83,000	97,000	17
Shop assistants, clerks, etc.....	16	152,000	189,000	25
Miscellaneous trades and occupations.....	198	379,000	462,000	22
General labor.....	13	732,000	1,102,000	50
Employees of public authorities.....	181	301,000	344,000	14
Total ⁴	1,220	5,547,000	6,624,000	19

¹ The total membership (all trades) includes members in colonial and foreign branches to the number (in 1918) of 49,126, of whom 22,063 belonged to the Amalgamated Society of Carpenters, Cabinet Makers and Joiners and 26,465 to the Amalgamated Society of Engineers.

² The figures are exclusive of the membership of General Labor Unions, for which see "General Labor."

³ Exclusive, as usual, of a few associations (generally unimportant) from which complete returns have not been received.

It is explained that the classification is necessarily somewhat rough, since trade-union organization is in many cases occupational and a minority of the members may be employed in trades other than that

with which the union has been classed. As an example it is noted that many members of the carpenters' and joiners' unions are employed in the shipbuilding industry but that no statistics are available as to the total number, and the whole of the membership of those unions is accordingly included under the building trades, in which the members are mainly employed.

Commenting upon the increase of female membership, the report states:

Of the total increase in female membership (about 320,000, or 36 per cent) in the year the cotton industry accounted for 15,000, or about 6 per cent of its female membership in 1917, and other textile trades, including textile printing, bleaching, dyeing, finishing, etc., for 40,000, or 34 per cent—a total increase for the textile trades of 55,000, or 15 per cent on their female membership of 363,000 in 1917. The female membership of other groups increased in 1918 from 540,000 to 806,000, the increase being made up as follows: Clothing trades 46,000 (or 64 per cent), printing, paper, etc., trades 19,000 (or 102 per cent), shop assistants, clerks, etc., 27,000 (or 58 per cent), miscellaneous trades 49,000 (or 21 per cent), "general labor" unions 103,000 (or 92 per cent), and employees of public authorities 22,000 (or 40 per cent). In connection with these figures it should be observed that the female membership stated in the returns received by the department is partly estimated, many unions being unable to state exactly the number of males and females, respectively.

A table is given showing the increase in membership over a period of years from 1913 to 1918, by groups of trades. There was a very slight increase in 1914 over 1913—from 4,192,000 to 4,199,000—but beginning with 1915 the increase each year over the preceding year was quite marked. The membership in 1915 was 4,417,000; in 1916, 4,677,000; in 1917, 5,546,000; and in 1918, 6,624,000.

Ninth Scandinavian Labor Congress, Copenhagen, January 21-23, 1920.

A RECENT communication to the State Department from the United States Minister at Copenhagen describes briefly the proceedings of the Ninth Scandinavian Labor Congress, which was held in that city January 21 to 23, 1920. The letter is as follows:

The ninth Scandinavian labor congress, comprising about 400 delegates from Norway, Sweden, Denmark and Finland, was in session in Copenhagen from January 21 to 23, inclusive. The congress was the first to be held since 1913, and it was expected in many quarters that its course and decisions would demonstrate that Scandinavian labor had grown much more radical, it being even considered possible that a distinct Bolshevik tone would prevail. These expectations however were not realized. With the exception of the Norwegian delegation, which evidently contained a substantial number of extremists, the congress appeared to be composed of men who advocated the attainment of social reforms by constitutional methods. Among the more prominent members of the conference were the Danish Minister of Labor, Stauning; the Swedish leader, Hjalmar Branting; and the leader of the social democratic group in the Norwegian Storting, Buen. The principal Finnish delegate was Yrjö Räsänen.

On the first day of the congress a Norwegian delegate proposed that a message of greeting should be sent to the Russian Soviet Government, with exuberant expressions of support. His motion however was referred to a committee and not taken up again during the congress.

Resolutions Adopted by the Congress.

With the exception of six Norwegian votes, the congress unanimously passed the following resolution:

It is the task of Social Democracy to win economic and political power with the object of making the means of production the property of the whole people and of socializing production.

For the attainment of this object labor is organized in three ways, namely: By trade as producers, cooperatively as consumers, and politically as citizens. None of these forms of organization by itself is sufficient. They complement and support each other and must cooperate as intimately as possible, while at the same time there is conducted the work of enlightenment and self-education, which will prepare the laboring class for administrative insight and capacity.

The congress exhorts the laboring class to a strong vocational and political work to win social power, so that the transition from capitalism to socialism can take place without the application of violent means. The socialistic society, which is a higher and nobler organization than the present one, must be developed organically in consonance with economic and cultural progress, built up by a laboring class, which steadily raises its material intellectual and moral level, and disciplines and capacitates itself for its great vocation, namely: To supplant labor for wages in the service of capitalists by cooperation between free and equal participants in production and distribution.

For the preparation of this, increased participation of labor in the control of industry will be useful and necessary, just as it will counteract the danger of bureaucracy in the conduct of present State, municipal, and private affairs. The right of codetermination, which has already been attained with reference to the conditions of labor through the influence of the trade-unions, must be in an increasingly degree extended to the right of codetermination in industry itself, whereby the workmen obtain an insight into the respective industries, secure increased interest in their conduct and an increased sense of responsibility, while, likewise, an insight into the accounts will in a steadily increasing degree insure to them the fruits of their labor, which in turn increases the joy of labor and the sense of responsibility.

The organization of control committees (vocational councils), which will further such a development, must take place in such a way that the trade-unions are not thereby divided or weakened, but supported and strengthened. They should be assured influence in the composition of the control committees. In these there should be representatives who can train themselves more and more in administrative and financial matters. At the same time, the interests of society should be assured by a supervisory council (economic council), eventually in connection with a district council or a special council for the various industries, with the power of carrying out the necessary control of industrial life, of seeking the substitution of private capital in steadily increasing degree by social capital, and of advancing a plan for an increasingly economical and fruitful organization of production. In the supervisory council (economic council) there should be represented besides the producers also the interests of society and the consumers.

The social organization of economic life contemplates a well-planned application of labor, raw material, energy, and technical auxiliaries in the interests of the laboring and consuming public. Socialization must in the first place include well-equipped industry, together with sources of power and supplies of raw material, while at the same time cooperation must be fostered with all strength.

Industrial democracy should thus be a part of the process of socialization. The congress warns against the idea that the economic reform of society can take place in a day, as well as against the tendencies to erect group property and group activities, which are not subject to the control of society. The congress maintains that democracy must be the basis and socialism the goal for the liberating efforts of the laboring class.

The world war, with its enormous failure for the capitalistic and militaristic system, has brought about a feeling among the masses that it is not worth while to produce wealth anew without the assurance that this wealth will not again be wasted with fearful sufferings for the peoples. It is the task of social democracy to lead this feeling

into a fruitful and organized course for conscious work toward a new and higher social order, in which the position of the workmen will be changed in principle through socialism, and toward a new and higher world order in which the democratic and socialistic peoples are organized in a real league of peoples for mutual help instead of wild competition and bloody war.

The congress exhorts the workmen in the Scandinavian countries to ever more powerful cooperation on the foregoing basis.

Subsidiary resolutions were passed on the following subjects: Socialization; Scandinavian cooperation; mutual support of labor in various countries; social legislation, and relations to the Internationale. Of these resolutions the most important is the last, whereby the congress clearly expressed its adherence to the old Social Democratic Internationale, and definitely recorded its unwillingness to be associated with the so-called Third Internationale. A proposal to join the Third Internationale, which was made by three Norwegian representatives, obtained only 15 votes as against the rest of the congress.

With reference to the Russian situation, a resolution in the following terms was passed, notwithstanding the efforts of certain Norwegian delegates to obtain a much more affirmative declaration in support of the Russian soviet system:

The congress notes with satisfaction that the efforts to restore the reactionary régime in Russia now finally seem to have failed—in spite of the support of international capitalism—thanks to the resistance of the Russian workmen and peasant classes, as well as to the unanimous protest of the international labor class, against foreign armed intervention in Russian affairs. The congress hopes that a speedy peace will afford the Russian people the possibility of free internal development and good relations with all other peoples.

The congress passed other resolutions, proposed by Branting: Welcoming the Finnish amnesty law; expressing disapproval of the terroristic counter-revolutionary régime in Hungary; protesting against Jewish pogroms in the Ukraine and elsewhere in eastern Europe; and finally protesting against the recently attempted abolition in Sweden of the legally established eight-hour day.

It seems to be generally felt in Denmark, though this feeling is not shared by the most conservative elements, that the Ninth Scandinavian Labor Congress was on the whole a moderate expression of the present status of the labor movement in Scandinavia.

STRIKES.

Trade Disputes in Great Britain in 1919.

DURING the year 1919 in Great Britain there were 1,413 trade disputes reported, this number being only once exceeded since 1888, namely in 1913, when 1,497 were reported. The number of workpeople involved directly and indirectly was 2,581,000, the highest total yet reported, and nearly equal to the combined totals for the four previous years. These facts are brought out in a summary of disputes in 1919 published in the British Labor Gazette for January, 1920. It is further stated that the aggregate duration of these disputes was 34,483,000 working days, or nearly twice as many as during the period 1915 to 1918. The number of disputes, the number of workpeople affected, and the aggregate duration of the disputes in 1919 as compared with 1918 are shown in the following table.¹ The number of workpeople includes those involved in disputes which began in the previous year and were still in progress at the beginning of the year.

TRADE DISPUTES IN GREAT BRITAIN IN 1918 AND 1919, BY TRADE GROUPS.

Trade group.	1918			1919		
	Number of disputes beginning in 1918.	Number of workpeople involved in all disputes in progress.	Aggregate duration in working days of all disputes in progress.	Number of disputes beginning in 1919.	Number of workpeople involved in all disputes in progress.	Aggregate duration in working days of all disputes in progress.
Building.....	134	56,000	458,000	150	25,000	578,000
Coal mining.....	147	368,000	1,165,000	212	906,000	7,441,000
Other mining and quarrying.....	18	13,000	109,000	32	5,000	138,000
Engineering and shipbuilding.....	300	169,000	840,000	188	304,000	9,592,000
Other metal.....	86	85,000	575,000	126	83,000	1,813,000
Textile.....	67	284,000	1,701,000	61	490,000	8,167,000
Clothing.....	70	24,000	321,000	77	29,000	245,000
Transport.....	67	59,000	265,000	129	574,000	3,883,000
Woodworking and furnishing.....	82	43,000	273,000	62	25,000	988,000
Other trades.....	188	38,000	413,000	277	119,000	1,381,000
Local authority services.....	93	13,000	117,000	99	21,000	257,000
Total.....	1,252	1,132,000	6,237,000	1,413	2,581,000	34,483,000

¹ These figures are preliminary and subject to correction.

In explanation of some of the disputes in 1919 the report says;

The principal disputes of the year occurred in the coal-mining, engineering, and shipbuilding, textile and transport industries. In the coal-mining industry 150,000 workpeople in Yorkshire ceased work for 13 days in January to enforce a simultaneous interval for surfacemen's meals, and again on July 16 for 29 days owing to dissatisfaction with the amount of advance in rates of wages which was proposed in com-

pensation for a reduction in working hours under the Sankey award. At the end of March 100,000 miners in various districts were idle for six days in support of a national application for an advance in wages. In the engineering and shipbuilding trades 150,000 workpeople stopped work in January and were idle for periods ranging in different districts, from one to eight weeks on the reduction of the working week from 53 or 54 hours to 47 hours, owing partly to dissatisfaction at the new arrangement of working hours and partly to the nonprovision of any increase in the rates of wages of pieceworkers and lieuworkers. On September 22 between 40,000 and 50,000 iron founders, core makers, and dressers ceased work for increases in wages and were still idle at the end of the year. In the cotton trade about 450,000 operatives struck work for 18 days in June and July in support of an application for reduced working hours and increased rates of wages. In the railway services about 500,000 operatives were idle from September 27 to October 5, inclusive, owing to dissatisfaction at the new standardized rates proposed for various grades. The majority of the other disputes occurring in 1919 arose either on demands for advances in wages or on questions of working hours.

Labor Unrest in the Belgian Coal Industry.

A REVIEW of the Belgian coal industry for 1919, published in the Board of Trade Journal (London) for February 19, 1920, reveals the existence of a considerable amount of industrial unrest. During the first half of the year 36 strikes involving 70 pits and 16,000 workers occurred. To deal with this unrest "Commissions de Conciliation" were established in various mining localities and "Commissions Régionales Mixtes" for larger districts.

These commissions consisting of representatives of operators and men, in an effort to settle existing disputes, established the principle of an 8½-hour day from June 1, 1919, and an 8-hour day from December 1, 1919, for pit workers, and a 9-hour day from June 1, 1919, for surface workers, and endeavored to settle other minor trouble-producing matters.

Notwithstanding their efforts, however, a serious strike occurred at Charleroi, December 15, 1919. The strike, which was declared contrary to the advice of the labor leaders, was due to two causes: (1) The enormous profits of the colliery owners from which the workers felt that they had not correspondingly benefited; (2) the unsatisfactory operation of the "Commissions Mixtes" due to "the procrastinating attitude of the miners' representatives, and of the absence of legal sanction for the decision of the commissions."

The men claimed (1) either a wage increase or State control of owners' profits; (2) a definition of the 8-hour day for pit workers and an 8½-hour day for surface workers, which should include time spent in descending and ascending, meals, etc.; (3) a pension of 2 francs (38.6 cents, par) per day; (4) an improved system of health insurance.

Through the intervention of the Ministry of Industry a settlement was reached December 20, 1919, in which the miners were guaranteed "(under protest from the owners)" a wage increase of 2.50 francs

(48.3 cents, par) per day, the other disputed questions being left to further discussion by the commissions and final settlement through proper legislation.

Establishment of an Emergency Strike-Breaking Corps in Germany.¹

DISCUSSING strikes in undertakings which are of vital importance to the general public, Dr. Waldemar Zimmermann, in an article in *Soziale Praxis*, writes that after the strike period of the first six months of 1919 a reaction against strikes set in, even among the workers themselves. This feeling was particularly in evidence in the case of the miners' strike, the steel strike, and the strike among employees in the water and electrical works, all of which directly affected the public. But the number of workers who attempted to prevent such strikes as these was small and their efforts were ineffective. Finally Herr Noske, the minister of national defense, recruited a voluntary workers' defense corps, to act, in such cases, for the protection of the nation at large.

Organization of the Corps.

AT the beginning of September last the "Emergency Engineer Corps" (*Technische Nothilfe*) made its appearance. It was formed from the engineer battalion of the former Berlin guard regiments, and in spite of its speedy demilitarization, i. e., its transference to a civilian instead of a military basis, it remained under the jurisdiction of the Ministry of Defense. The *Correspondenzblatt*² publishes the following regarding the organization and activities of this emergency corps:

The corps has its headquarters in Berlin and branch offices in various districts of Germany, which for this purpose was divided into 19 districts. In every district, a volunteer engineer corps was formed out of technical experts, skilled and unskilled workers, with three groups: The first consisting of volunteers ready for employment throughout Germany, the second of those who were willing to serve in their own district, and the third of those who were ready to serve in their own place of residence, should occasion arise. The emergency corps was to intervene only when industrial establishments of vital importance were about to be crippled by political strikes—establishments, that is, which supply the public with gas, electricity, water, foodstuffs, etc. Protective measures were adopted in advance; in every industrial establishment the nature and place of his activities were prescribed for each volunteer, so that immediately after a strike breaks out, operation of the establishment can be carried on by the emergency corps, in conjunction, on occasion, with those workers and employees who are willing to continue at work and are not desirous of taking part in a political strike. For the purpose of these preparations the emergency engineer corps has procured accurate working plans, descriptions of the machinery, boilers

¹ Source: *Soziale Praxis und Archiv für Volkswohlfahrt*, Vol. 29, No. 7, Berlin, 1919; *Correspondenzblatt der Generalkommission der Gewerkschaften*, Berlin, Oct. 25, 1919.

² *Correspondenzblatt der Generalkommission der Gewerkschaften*, Berlin, October 25, 1919.

and plant, and lists of the workers in the works concerned, and has secured itself an imposing array of volunteers by confidential personal canvassing. According to the central office, about 30,000 volunteers have been obtained for the entire Commonwealth, and 6,000 for Berlin alone.

Trade-Union Criticism.

DURING the brief period of its existence, it seems that the emergency engineer corps has been able to give a few proofs of its utility and efficiency. The extension of the Berlin metal workers' strike by a sympathetic strike of electricians was the first occasion on which the intervention of the corps aroused attention. As a general rule, according to the paper quoted above, the fact that such a corps exists acts as a deterrent to certain improper strike practices in public utility works. That would seem to be best proved by the demonstrations of indignation on the part of those workers and employees who find themselves especially affected and who claim that emergency corps are unnecessary, since the organizations that arrange the strikes invariably take meticulous care not to allow vital economic processes to be interrupted by the strike. In face of such protestations of innocence it would seem as if the emergency corps were the heartless invention of a reactionary strike-breaking Government. As a matter of fact, it is contended, if it had been so it would have been very difficult for the National Government, with its strong infusion of trade-unionists, to adopt this public measure of defense which has been received with complacence and in part with actual satisfaction by all classes of society save the Independent Socialists alone. In the National Assembly on October 17, Herr Noske, minister of national defense, replied to the criticism of the emergency corps by the Independent Socialists and declared that any man who again attempted to cripple works vital to the public would very soon find himself under lock and key; so much was due for the protection of the lives and health of hundreds of thousands of people.

Some notice may be taken of the protests of the committee of the Association of Municipal and State Workers and of the Berlin committee of the Joint Board of Free Employees' Associations. The former claims to notice widespread unrest among its workers in public utility works, and similar unrest in Munich has already led to the refusal of the services of the emergency corps by the authorities. Even if the Government does not wish to touch the right to strike, the emergency corps, it is stated, practically puts an end to the efficacy of a strike. The association protests in the name of 250,000 workers in public establishments against the corps, in the conviction that the workers are seriously desirous of protecting these establishments from all attacks from within or without. The latter body, by

its committee's resolution, acclaims the general right to strike as "one of the most noteworthy victories of the revolution," and consequently takes great exception to the fact that the right of combination hitherto conceded without conditions by the Government is being restricted by an embargo on strikes by the military authorities and by organizations which receive official support and which make the right of certain workers to strike ineffective. The resolution continues:

The reason alleged for the existence of the emergency corps, that for the maintenance of certain vitally necessary industrial establishments emergency work must be performed, is untenable. The trade-unions, even in their most bitter economic conflicts, have always observed the laws of humanity without there being any necessity for Government intervention. It is, however, desirable that in all cases where the authorities, for reasons connected with the public safety or health, deem it necessary to intervene, an agreement should be come to with the trade-unions concerned with respect to the introduction of emergency labor.

A Defense of the System.

THE emergency corps is regarded by some as an urgent necessity. At the meeting of members of the Majority Socialist party on October 20, 1919, a resolution of sympathy with the metal workers out on strike was passed, but regret was expressed that by the contemplated crippling of the electrical works the life and health of thousands would be seriously endangered. A promise to carry on necessary work would have had no value, since it is technically impossible to convey current to hospitals and such institutions alone. The meeting consequently considered that the continuance of operation of the power works with the aid of the emergency corps was a necessity, and, finally, uttered a vigorous protest against the attempt to exclude members of the corps from the trade-unions.

The second part of the protest—that the emergency corps is making the right to strike ineffective and is tampering with the unconditional right to combine—is said to be contradicted by the facts. The original cause of the protest was the intervention of the corps in the Berlin metal workers' strike, when, owing to a lack of firm leadership among the workers, the strike leaders desired to attack a vital organism of the city and to replace the lack of cohesion in their own ranks by sabotage. And if this weapon of force, bringing sickness, hunger, and cold to the innocent, is taken out of the hands of the trade-unions, should it be called an attack on the right to strike and combine? The Government and the emergency corps have repeatedly given the assurance that they will never intervene in the case of economic strikes, but only in that of political strikes which threaten the health and lives of the public, and that intervention will cease at once when the danger is past. This assurance meets with approval from the great majority of the nation.

CONCILIATION AND ARBITRATION.

Provisions for Dealing with Labor Disputes in Great Britain During the War.¹

THE Ministry of Labor has just published a report (No. 185 of 1919) of proceedings under the Conciliation Act, 1896, and of arbitration under the Munitions of War Acts, together with particulars of (1) proceedings under the Wages (Temporary Regulation) Act, 1918, and (2) settlements arrived at under the Coal Mines (Minimum Wage) Act, 1912.

The report, which has been prepared in the wages and arbitration department of the ministry, relates to the war years 1914-1918.

The requirements of the war necessitated new powers for dealing with labor disputes, and these have been traced in some detail in the report with special reference to the following points:

1. The Conciliation Act, 1896. This was the only act under which, prior to the war, steps could be taken by the appropriate Government department (at that time the Board of Trade) for the settlement of labor disputes. The act provided for voluntary conciliation and arbitration, and gave the department no compulsory powers.

2. The Committee on Production. This committee was established in February, 1915, to inquire and report as to the best steps to be taken "to insure that the productive power of employees in engineering and shipbuilding establishments working for Government purposes should be made fully available so as to meet the needs of the nation in the present emergency." With the establishment of the Ministry of Munitions the functions of the committee in regard to production were absorbed by the ministry. The committee then became an arbitration body and quickly developed into the principal arbitration tribunal for the settlement of labor disputes.

3. The "Treasury Agreement" on the subject of the acceleration of output on Government work, negotiated by the chancellor of the exchequer and the president of the Board of Trade in March, 1915, with the principal trade-unions. The Government's main proposals embodied in the agreement were on the one hand to limit profits and on the other to prevent stoppages of work owing to trade disputes, and to secure the suspension during the war of restrictions on output.

¹ From the Labor Gazette, London, February, 1920 pp. 58, 59).

4. The Munitions of War Act, 1915. This act, passed in July, 1915, introduced compulsory arbitration at the option of the Board of Trade, together with the legal prohibition of strikes and lockouts in certain circumstances, and the statutory enforcement of awards. The act also gave legal sanction to the Government's pledge to limit profits, and generally to the terms of the "Treasury Agreement."

5. The Munitions of War Act, 1916. As regards the matters dealt with in this report, the principal amendments increased the Government powers in respect to compulsory arbitration, extended the definition of "munitions work," and established new arbitration tribunals for women, and for semiskilled and unskilled men.

6. The New Ministries and Secretaries Act, 1916, under which the powers and duties of the Board of Trade in regard to the settlement of labor disputes were transferred to the Ministry of Labor.

7. The Commission of Inquiry into Labor Unrest, appointed in June, 1917, following a dispute in May involving about 200,000 work-people in the engineering trades in various parts of the country.

8. The Munitions of War Act, 1917. This act inter alia made provisions for the legal extension of awards to the whole of a trade or industry. It also authorized the minister of munitions to give directions as to the remuneration for work paid at time rates; it was under this authority that the orders giving the 12½ per cent bonus on earnings to time workers in the engineering and foundry trades and in shipbuilding and ship-repairing establishments were issued.

9. The Wages (Temporary Regulation) Act, 1918, passed shortly after the armistice. This act modified the sections of the Munitions of War Acts relative to the legal prohibition of strikes and lockouts and compulsory arbitration, and also stabilized wages during the period of transition from war to peace conditions.

Included in the report is a note on some of the results which were observed for the working of the measures adopted during the war for the prevention of strikes and lockouts, with particular reference to (a) the question of the legal prohibition of strikes and lockouts and the accompanying provisions for compulsory arbitration and for the enforcement of awards, and (b) the steps taken to secure coordination of the labor activities of Government departments. A note has been included on the various commissions of inquiry which were set up during the war to examine the question of labor unrest. An account is also included in the report of the general wage movements during the period of the war, reference being made to the various agreements negotiated during the war for a four-monthly hearing of general wage applications by the committee on production, the course of wage increases in the engineering trade being specially dealt with.

The report also contains particulars of the cases referred to arbitration during this period, and shows the large extent to which this method of settling disputes was adopted throughout the war period. The number of cases referred to arbitration during the period under review was approximately 8,000, of which about one-half were dealt with by the committee on production.

In practically every trade, wages and working conditions were at one time or another dealt with by conciliation or arbitration proceedings under the auspices of the department, and in many important trades these were determined periodically by a series of awards. The cases referred to arbitration, while relating mainly to wages questions, concerned all branches of working conditions. A summary of the various awards and conciliation settlements appears in appendixes to the report.

The report also contains a diagram showing month by month from January, 1914, to December, 1918, the number of strikes and lockouts commencing during the month, and the number of work-people involved in strikes and lockouts.

PUBLICATIONS RELATING TO LABOR.

Official—United States.

DISTRICT OF COLUMBIA.—*Minimum Wage Board. Second annual report for the year ending December 31, 1919. Washington, 1920. 60 pp.*

A summary of this report is given on pages 112 to 115 of this issue of the MONTHLY LABOR REVIEW.

HAWAII.—*Governor. Report to the Secretary of the Interior for the fiscal year ended June 30, 1919. Washington, 1919. 89 pp. Map.*

Contains sections on prohibition; population, immigration, and labor; industrial accident boards; and public health.

ILLINOIS.—*Pension Laws Commission. Report, 1918-1919. A proposed standard plan for a comprehensive and permanent system of pension funds. [Springfield, 1919.] x, 379 pp.*

A brief digest of this report is given on pages 189 and 190 of this issue of the MONTHLY LABOR REVIEW.

PENNSYLVANIA.—*Department of Public Instruction. The school law and an appendix, 1919. Harrisburg, 1920. 320 pp.*

Among the subjects included are Vocational and other special schools; Child labor and continuation schools; Employment of children; and Teachers' retirement system.

UTAH.—*Industrial Commission. Supplemental report, including analysis of industrial accidents covering causes, extent and duration of disability, degrees of disability, occurrence of accidents by month of year, together with a special study of specific injury and fatal cases for period July 1, 1917, to June 30, 1918. Salt Lake [1918]. 95 pp. Tables.*

WISCONSIN.—*State Board of Vocational Education. Courses of study. Cabinetmaking: Shop, drawing, safety, mathematics, trade technology, equipment, references. Madison, 1919. 15 pp. Monograph No. 8.*

——— *Printing: Shop, mathematics, English, technology of trade, safety and hygiene, equipment, references. Madison, 1919. 13 pp. Monograph No. 6.*

——— *Telegraphy: Shop, science, trade technology, equipment, references. Madison, 1920. 14 pp. Monograph No. 7.*

UNITED STATES.—*Congress. Joint commission on reclassification of salaries. Report submitting a classification of positions on the basis of duties and qualifications, and schedules of compensation for the respective classes. March 12, 1920. Washington, 1920. 884 pp. 66th Congress, 2d session. House document No. 686.*

Some account of this report appears on pages 105 to 108 of this issue of the MONTHLY LABOR REVIEW.

——— *Department of Commerce. Bureau of Foreign and Domestic Commerce. British industrial reconstruction and commercial policies. Washington, 1920. 88 pp. Special agents series, No. 193.*

——— *Department of Labor. Bureau of Immigration. Annual report of the commissioner general of immigration, fiscal year ended June 30, 1919. Washington, 1919. 412 pp.*

——— *Woman in Industry Service. Wages of candy makers in Philadelphia in 1919. Washington, June 28, 1919. 46 pp. Bulletin No. 4.*

——— *Women's Bureau. Women in the Government service. Washington, 1920. 37 pp. Bulletin No. 8.*

A summary of this report was published in the MONTHLY LABOR REVIEW for January, 1920, pp. 208-217.

UNITED STATES.—*Department of the Interior. Bureau of Education. Some phases of educational progress in Latin America, by Walter A. Montgomery. Washington, 1920. 62 pp. Bulletin, 1919, No. 59.*

A special feature of this report is the account of industrial and vocational training given under the various educational systems of these countries.

— *Federal Board for Vocational Education. Coal-mine gases. Washington, October, 1919. 36 pp. Bulletin No. 39, Trade and industrial series No. 9.*

This bulletin is supplementary to General mining bulletin No. 38 (Trade and industrial series No. 8), and is intended to form the basis of instruction in a study of coal-mine gases in trade extension classes, the material having been prepared originally for use in the mining extension class of West Virginia. It contains information of which every man in the mine, including superintendent, foreman, and fire boss should possess at least an elementary knowledge.

— *Industrial Conference. Report of conference convened by the President December 1, 1919. Washington, March 6, 1920. 51 pp.*

This report is treated in an article published in this issue of the MONTHLY LABOR REVIEW, pages 33 to 40.

— *Railroad Administration. Comparative amounts of railroad labor and pay December, 1917, and January to July, 1919. Letter from the Director General of Railroads in response to a resolution of the Senate of August 20, 1919, submitting statements relating to the amount of railroad labor and its rates of pay in December, 1917, and in each month from January to July, 1919. Washington, 1919. 184 pp. 66th Congress, 1st session. Senate Document No. 154.*

This statement is noted briefly in the December, 1919, issue of the MONTHLY LABOR REVIEW, pages 229 to 236.

— *Tariff Commission. Costs of production in the dye industry, 1918 and 1919. Details of costs for a selected list of dyes and intermediates. Washington, 1920. 24 pp. Tariff information series No. 15.*

Official—Foreign Countries.

AUSTRALIA.—*Bureau of Census and Statistics. Labor and Industrial Branch. Prices, purchasing power of money, wages, trade-unions, unemployment, and general industrial conditions, 1918. Melbourne, July, 1919. 268 pp. Report No. 9.*

Contains information in summarized form regarding labor organizations, employment and unemployment, wholesale and retail prices, rents, purchasing power of money, cost of living, wages, hours of labor, industrial disputes, operations under Arbitration and Wages Board Acts, and industrial accidents. The appendixes contain detailed information on wholesale and retail prices and rents and on minimum rates of wages and hours of labor in the important occupations in the several States on December 31, 1918.

— — — *Official yearbook, containing authoritative statistics for the period 1901-1917, and corrected statistics for the period 1788 to 1900. Melbourne [1919]. No. 11.—1918. xl, 1246 pp. Maps.*

— (SOUTH AUSTRALIA).—*Inspector of factories. Report, 1918. Adelaide [1919]. 12 pp.*

Reports 1,814 factories registered, employing 18,566 persons, of whom 1,280 were children between the ages of 13 and 16 years. About 30 per cent of the total employees were females. Included is a list of trades in which the number of hours worked per week is from 44 to 56. The report gives a comparison by industry and by sex and age of workers of wage rates prevailing in 1917 and 1918. These show a marked increase in 1918.

CZECHO-SLOVAKIA.—*Ministère de la Prévoyance Sociale. La Conférence du Travail et l'État Tchéco-Slovaque. Prague, 1919. 78 pp.*

As indicated by the title this brochure is essentially a digest of the labor laws in force in Czecho-Slovakia on September 30, 1919. "The Republic has not yet been able to establish its social policy, but it has undertaken to modify in consonance with new conditions some portions of the Austrian and Hungarian codes which in so far as they have not been amended constitute the law of the land during the period of transition."

A chapter is devoted to the history of the social policy of the State from its origin up to the date of the revolution, October 28, 1918. Such social laws as have been enacted by the National Assembly are noted in the MONTHLY LABOR REVIEW for February, 1920, pp. 239 to 245.

FRANCE.—*Ministère du Travail et de la Prévoyance Sociale. (Direction des Retraites Ouvrières et Paysannes.) Recueil de documents sur les retraites ouvrières et paysannes; Instructions et circulaires. Première série, seconde série. Paris, June 1, 1914, June 1, 1919. 390, 283 pp.*

Text of instructions and circulars in force on June 1, 1914, and June 1, 1919, concerning retired workmen and peasants.

——— *Lois, décrets et arrêtés. Paris, January 1, 1919. 220 pp.*

Text of laws, decrees, and acts in force January 1, 1919, regarding retirement of workmen and peasants.

GERMANY.—*Statistisches Amt. Streiks und Aussperrungen, 1915, 1916. Berlin, 1916-17. 25*, 25 pp. Statistik des Deutschen Reichs, Band 280, 282.*

Volumes 280 and 282 of the Statistics of the German Empire published by the Imperial Statistical Office and containing the official strike statistics for the years 1915 and 1916. The extent of strikes and lockouts in these two years is shown in the following table:

STRIKES AND LOCKOUTS IN GERMANY IN 1915 AND 1916.

Year.	Strikes.				Lockouts.			
	Number.	Estab- lishments affected.	Strikers.	Days lost.	Number.	Estab- lishments affected.	Persons locked out.	Days lost.
1915.....	137	178	11,639	41,838	4	7	1,227	3,673
1916.....	240	437	124,188	245,404	.....	.....	.....	.....

The number of strikes, strikers, lockouts, and locked-out workers in 1915 was insignificant compared with that of prewar years. In 1916 the number of strikes and strikers increased considerably but no lockouts were reported during the year. Of the 141 labor disputes reported in 1915, 24 terminated favorably for the strikers, 39 were partly successful, and 78 failed from the workers' point of view. The corresponding figures for the 240 strikes of 1916 were 27, 130, and 83.

GREAT BRITAIN.—*Board of Education. Salaries of teachers in public elementary schools. England and Wales. Statement showing the number of teachers—classified according to sex, qualifications, and (except for schools not maintained by local education authorities—Education Act, 1902, sec. 15) type of area in which employed—in public elementary schools in England and Wales, who on the 1st day of April in each of the years 1917, 1918, and 1919 were in receipt of annual salaries of the amounts specified. London, 1919. 15 pp. Cmd. 513. Price, 2d. net.*

——— *Board of Trade. Statistical Department. Statistical abstract for the United Kingdom in each of the last 15 years from 1903 to 1917. Sixty-fifth number. London, 1919. 429 pp. Cmd. 491. Price, 1s. 9d. net.*

GREAT BRITAIN.—[Foreign Office.] *Report on Japanese labor, by Oswald White.* London, 1920. 42 pp. Cmd. 511. Price, 3d. net.

Touches briefly upon the physical and mental qualities of Japanese labor, explaining why such labor is inefficient. States that it is the oversupply of labor that causes poor wages and low efficiency, and refers to woman and child labor as a feature of Japanese industry. There is considerable home work done, which is "wretchedly paid." Draws a rather dark picture of Japanese labor conditions, but concludes that employers have come to realize that the care of their workmen pays and that the treatment accorded to them in some instances "appears to reach a comparatively high level." Tables are given showing the extent to which labor was employed in factories at the end of 1916; results of an inquiry into the cost of living in 1912; an actual family budget; average wages paid in Yokohama in July, 1914, and June, 1919, and in Tokyo in November, 1918; and strikes in Japan in specified months in 1919.

— *Home Office. First aid and ambulance at factories and workshops.* London, 1919. 21 pp. 9 plates. Price, 6d. net.

Issued for "the guidance of occupiers of factories and workshops in establishing at their works a satisfactory first-aid and ambulance service."

— *Chief inspector of mines. Mines and quarries: General report, with statistics, for 1918. Part III.—Output.* London, 1919. Pp. 145-168. Cmd. 531. Price, 3d. net.

The total value of the minerals produced during the year amounted to £257,079,792 (the par value of £1=\$4.8665), which was an increase of £33,145,803 as compared with 1917. The total output of coal was 227,748,654 tons, and the value £238,240,760, showing a decrease in the output of 20,750,586 tons and an increase in the value of £30,453,866 on the figures for 1917. The average price of coal was 20s. 11.06d. per ton in 1918, as compared with 16s. 8.68d. in 1917.

— *Ministry of Labor. Conciliation Act, 1896. Twelfth report of proceedings under the Conciliation Act, 1896, and report on arbitration under the munitions of war acts. Together with particulars of (1) Proceedings under the Wages (Temporary Regulation) Act, 1918, and (2) Settlements arrived at under the Coal Mines (Minimum Wage) Act, 1912. General report, 1914-1918. Vol. I.* London, 1919. 63 pages. Chart. 185. Price, 4 d. net.

— *Directory of joint standing industrial councils, interim industrial reconstruction committees, and trade boards, with index of members.* [London] January, 1920. 91 pp.

Lists 51 joint industrial councils in industries employing about 3,250,000 workpeople; 24 interim industrial reconstruction committees covering about 491,300 workpeople; and 23 trade boards representing some 790,200 workpeople.

— *Treasury. Staffs employed in Government departments. Statement showing the staffs of Government departments on 1st December, 1919, compiled from returns furnished to the Treasury.* London, 1920. 3 pp. Cmd. 533. Price, 1 d. net.

ITALY.—*Direzione Generale del Lavoro e della Previdenza Sociale. Divisione Previdenza Sociale. Assicurazione obbligatoria contro gli infortuni sul lavoro in agricoltura. Atti della commissione incaricata di predisporre lo schema di regolamento.* Rome, 1919. 220 pp. *Previdenza Sociale.* N. 2.

The minutes of the commission appointed by the Italian Ministry of Industry, Commerce and Labor, to prepare regulations for the carrying out of the law of August 23, 1917, relating to compulsory insurance against accidents in agriculture.

LEAGUE OF NATIONS.—*Economic and finance section. Conference on international cooperation in statistics, August 14 and 15, 1919.* London, Harrison & Sons [1919]. 41 pp.

Presents a summary of discussions in the conference on international cooperation and statistics held in London in August, 1919; also a brief statement relating to the work of the permanent office of the International Institute of Statistics, which is a private institution in which 27 countries have representation. Rules governing the

organization are given. There is also a brief résumé of the subjects on which statistics are now being gathered, including strikes and lockouts, employment, wages and hours of labor, cost of living, collective labor contracts, trade-unions and associations, cooperation, immigration, emigration, agriculture, railroads, insurance, housing, etc. The work of the Bureau of Statistics of the International Institute of Agriculture is briefly described.

SPAIN.—*Instituto Nacional de Previsión. Qué es el Instituto Nacional de Previsión. Su origen. Operaciones que realiza. Disposiciones por que se rige. Tarifas. Madrid, 1919. 40 pp.*

This pamphlet presents the purpose, history, and operations of the various pension systems under Government supervision in Spain.

SWITZERLAND (ZÜRICH).—*Statistisches Amt. Statistisches Jahrbuch der Stadt Zürich. Jahrgang 1917 zum Teil auch 1918. Zürich, 1919. xxviii, 31*, 338 pp.*

The thirteenth volume of the statistical yearbook of the city of Zürich giving data for 1917 and partly for 1918.

Unofficial.

AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE. *The annals. Vol. 87, No. 176. The new American thrift. Philadelphia, January, 1920. 1-248 pp.*

Among the subjects treated in this issue the following are of special interest from the worker's standpoint: Thrift as a family and individual problem—some standard budgets, by B. R. Andrews; Thrift and labor, by A. H. Hansen; Organized labor's attitude towards the national thrift movement, by Frank E. Wolfe; Food thrift, by Raymond Pearl; The function of salvage in the education of industrial workers, by George W. Sherman; The development of thrift facilities, by Milton W. Harrison; and Cooperative credit institutions in the United States, by James B. Morman.

AMERICAN FEDERATION OF LABOR. *Illinois Branch. Proceedings of thirty-seventh annual convention. Peoria, Victor A. Olander, secretary-treasurer, 1919. 356, pp.*

— *Michigan Branch. Proceedings of the thirtieth annual convention. Lansing, Perry J. Ward, secretary-treasurer, 1919. 81 pp.*

AMERICAN GAS ASSOCIATION. *Committee on accident prevention. Accident prevention. [Philadelphia, 1919.] 27 pp.*

The latest report of this committee is largely devoted to a safety code under the heading "Precautionary measures." There is included an analysis of 1,000 cases of accident reported by 77 companies in 29 States. Among 14,656 persons employed at the time of reporting, there were 1,000 nonfatal accidents during the first nine months of 1919. Several charts are presented showing the number of cases due to various causes, the distribution by days of the week and by hours of the day, etc.

AMERICAN LABOR YEAR BOOK, 1919-20. *Edited by Alexander Trachtenberg. New York City, Rand School of Social Science, 1920. 447 pp.*

Summarizes briefly the most recent developments in the labor movement, both in the United States and in foreign countries. The material is arranged in six principal parts, and an appendix: I. Labor in the war; II. The labor movement in the United States; III. Labor and the law; IV. Social and economic conditions; V. The international socialist, labor, and cooperative movement; VI. The socialist movement in the United States; Appendix.

ARONOVICI, CAROL. *Americanization. St. Paul, Keller Pub. Co., 1919. 48 pp.*

Characterizing the Americanization movements as still in a formative state with "achievement hardly measurable in concrete terms," the author considers basic factors upon which he believes national unity might be built.

BULLOCK, EDNA D., COMPILER. *Selected articles on the employment of women. Second and enlarged edition by Julia E. Johnson. New York, The H. W. Wilson Co., 1920. 214 pp. Debaters' handbook series. Bibliography.*

CAVAILLÉ, J. *La Journée de huit heures. La loi du 23 avril 1919. L'historique-l'esprit-le mécanisme d'application.* Paris, 1919. 146 pp.

The first part of this study is devoted to a historical review of the eight-hour movement from its origin in England in 1833, when the first demand was followed by a strike of the tailors in London, up to April 23, 1919, when the eight-hour law was passed by the French parliament.

The second part is an analysis of the law; its application to varied industries; definition of hours of work; its effect on wages; and the methods of enforcement.

The text of the law of administrative regulations under it and of collective agreements of national scope entered into are given as appendixes.

CLARK, ALICE. *Working life of women in the seventeenth century.* London, George Routledge and Sons (Ltd.), 1919. 335 pp.

COURAU, R. *Les Assurances Sociales dans les Industries d'Alsace et de Lorraine. Code impérial d'assurances. Assurance des employés. Caisses minières de secours.* Strasbourg [1919]. 116 pp.

DUBLIN, LOUIS I. *The mortality of bituminous coal miners from influenza-pneumonia, October to December, 1918. In Journal of Industrial Hygiene, Boston, February, 1920. P. 483.*

Mortality figures for a total of 4,700 miners insured in the group department of the Metropolitan Life Insurance Co. during the period of the influenza-pneumonia epidemic in 1918 show that bituminous coal miners suffered severely from the epidemic as compared with workers in other occupations. The following table gives the death rates by age periods among such miners in comparison with those for all occupied white males:

INFLUENZA-PNEUMONIA MORTALITY AMONG BITUMINOUS COAL MINERS, OCTOBER TO DECEMBER, 1918, COMPARED WITH ALL OCCUPIED WHITE MALES.

Age group.	Annual death rate per 1,000.	
	Bituminous coal miners.	All industrial white males.
All ages (15 years and over).....	50.1	22.3
15 to 25 years.....	29.5	17.5
25 to 45 years.....	62.1	32.6
45 to 65 years.....	44.4	11.7

EDIE, LIONEL D., EDITOR. *Current social and industrial forces.* New York, Boni and Liveright, 1920. 393 pp.

A collection of extracts from the writings of authorities on various phases of the subject, grouped under the general headings of Forces of disturbance, Potentialities of production, The price system, The direction of industry, The funds of reorganization, The power and policy of organized labor, Proposed plans of action, Industrial doctrines in defense of the status quo, and The possibilities of social science. The chief distinguishing feature of the book is stated to be an "effort to bring a wide variety of liberal minds to bear on the social and industrial problem." There is an introduction by James Harvey Robinson.

ENGINEERING COUNCIL. *Report of committee on classification and compensation of engineers.* New York, 29 W. Thirty-ninth Street, December 15, 1919. 17 pp.

Contains a scheme for the classification of all classes of engineers with a tabular statement of salaries received in the Federal, State, and municipal services, and a schedule of proposed salaries submitted for discussion by the council.

GARTON FOUNDATION. *Memorandum on the industrial situation after the war. Revised and enlarged edition. London, January, 1919. 175 pp. Price, 2s. net.*

The present edition represents a considerable amount of revision and addition based upon the development of new issues and the enhanced importance of others since the publication of the first edition in October, 1916. This earlier edition was noted in the September, 1918, issue of the MONTHLY LABOR REVIEW, page 353.

GILBRETH, FRANK B., and GILBRETH, ILLIAN M. *Unnecessary fatigue—a multibillion enemy to America. In the Journal of Industrial Hygiene, Vol. I, No. 11. Boston, March, 1920. Pp. 542-545.*

This paper urges upon workers, organizations, and employers the value of the elimination of unnecessary fatigue.

HAMMOND, J. L., and HAMMOND, BARBARA. *The skilled laborer, 1760-1832. London, Longmans, Green and Co., 1919. 397 pp.*

HICHENS, W. L. *The new spirit in industrial relations. Being an address delivered at the United Summer School, Swanwick, Derbyshire, 1919. London, Nisbet & Co. (Ltd.), 1919. 31 pp. Price, 6d. net.*

INDEPENDENT LABOR PARTY (BRITISH). *Report of the twenty-seventh annual conference held at Huddersfield, April, 1919. London, 1919. 126 pp.*

INTERNATIONAL ASSOCIATION FOR LABOR LEGISLATION. *French section. Les clauses du travail dans le Traité de Paix. Rapport de M. Justin Godart. Paris, 1919. 62 pp. Nouvelle serie No. 15.*

— — — *La semaine anglaise dans l'industrie du vêtement. Rapport présenté à l'Association française pour la Protection légale des Travailleurs par Raoul Jay. Paris, 1918. 43 pp. Nouvelle serie No. 14.*

LAKE CARRIERS' ASSOCIATION. *Annual report, 1918. Detroit, P. N. Bland Printing Co., 1919. 211 pp.*

LEACOCK, STEPHEN. *The unsolved riddle of social justice. New York, John Lane Co., 1920. 152 pp.*

This book presents a résumé of the problems which have developed since the beginning of the "industrial revolution" and especially of the troubled outlook which now confronts the world. The author analyzes socialistic aims and concludes that neither socialism nor the old individualism will work, but that while retaining our present system an awakened public conscience must see to it that unemployment and neglect of the old and the infirm and of children shall not be allowed; and that more opportunities for leisure, through shortened working hours and "a progressive movement of social control alleviating the misery which it can not obliterate and based upon the broad general principle of equality of opportunity," must be established.

MACDONALD, J. RAMSAY. *Parliament and revolution. Manchester, England, The National Labor Press (Ltd.), 1919. 116 pp. The Socialist Library XII.*

MARRIOTT, J. A. R. *The right to work. An essay introductory to the economic history of the French revolution of 1848. Oxford, England, Clarendon Press, 1919. 97 pp.*

"MINES FOR THE NATION" CAMPAIGN COMMITTEE. *Campaign leaflets Nos. 1 to 12. Cooperative Printing Society (Ltd.), London [1919].*

These leaflets form part of the propaganda of the British miners for nationalization of the coal mines and present statistics of accidents, wages, profits, output, strikes and lockouts, and prices as arguments for the adoption of their program.

MOCK, HARRY E. *Industrial medicine and surgery. Philadelphia, W. B. Saunders Co., 1919. 846 pp. 210 illustrations.*

This book deals with the new specialty "the human maintenance problem in industry," and is divided into six parts: Industrial health service; Prevention; Industrial medicine; Industrial surgery; Compensation; Insurance; Medico-legal phrases; and Reconstruction. It is based upon the author's experience as chief physician in a plant employing 15,000 persons.

It contains a detailed discussion of the establishment requirements, arrangements, equipment, maintenance, and other points connected with the operation of the large industrial health department. Especially valuable are the models of systems for keeping records, the precise descriptions of arrangement and equipment of medical-aid rooms, and the suggestions as to methods of conducting examinations and interviews and as to the number of physicians and nurses needed to give adequate care to large numbers of employees.

The book emphasizes that, on the one hand, incompetent and insufficiently trained doctors are bringing discredit upon industrial medicine and, on the other hand, because of the lack of opportunity for advancement, medical students of the better type do not seem inclined to select "mass" medicine as their life work. Dr. Mock favors the employment of part-time industrial physicians, believing that in this way the industry can get a better type of physician for the same outlay, and that this type of physician can afford to work on a part-time basis and utilize the remainder of his time in private practice and scientific investigation in his own specialty.

MUSCIO, BERNARD. *Lectures on industrial psychology. Second edition (revised). New York, E. P. Dutton & Co., 1920. 300 pp.*

Subjects discussed in these lectures are: The immediate aim of industrial psychology; Mental factors relevant to industry; Selection of workers on the basis of natural fitness; The best method of work; and The desirability of applying psychology to industry.

NAST, ALFRED. *Principes coopératifs et exposé synthétique de la législation. Paris, 1919. 330 pp. La Régime Juridique des Coopératives. Bibliography.*

This book is a study of the various forms of cooperation in France, covering producers and consumers cooperation, credit banks, cooperative agricultural societies, cooperative societies for the erection of cheap dwellings, and cooperative restaurants among munition workers. The first part of the book is devoted to a general discussion of the principles of cooperation and a classification of the different forms; the second part to an analysis of the laws relating to cooperation both in France and other countries.

NATIONAL CONFERENCE OF SOCIAL WORK. *Proceedings at the forty-sixth annual session held in Atlantic City, N. J., June 1-8, 1919. Chicago, 1920. 813 pp.*

An account of some of the features of this session of the conference is contained in the July, 1919, issue of the MONTHLY LABOR REVIEW, pages 119 to 123, and 238 to 242. Some of the papers read at the conference are also found in the same number of the REVIEW, pp. 1 to 13, 243 to 255.

The secretary of the conference thus summarizes the character of it: "In this year's proceedings, the incidence of new principles in social work and of contemporary influences upon welfare programs is more traceable than heretofore. An example is the paramount question of the bearing of the standard of living on social remedies, as developed especially in the symposium of the Division on Health. The dominance of the labor interest is shown through discussion appropriately not only in the Division on Industrial and Economic Problems, but in nearly every other division."

NATIONAL CONFERENCE ON AMERICANIZATION IN INDUSTRIES. *An outgrowth of the National Conference of Americanization Workers, held in Washington in May under the auspices of the Department of the Interior. Proceedings, Nantasket Beach, Boston, Mass., June 22, 23, and 24, 1919. A round-table conference of the actual workers engaged in Americanization activities within industrial concerns. Boston, 1034 Kimball Bldg., 1919. 144 pp.*

NATIONAL SAFETY COUNCIL. *Safe practices. No. 32. Exhaust systems. Chicago, 168 N. Michigan Avenue, 1920. 16 pp. Illustrated. Price, 25 cents.*

NATIONAL TRANSPORTATION CONFERENCE. *Program of railroad legislation. Washington, October, 1919. 185 pp. Charts.*

Contains a statement by W. N. Doak before the Committee on Interstate and Foreign Commerce of the United States House of Representatives, July 25, 1919, on the subject of boards for adjustment of wages and working conditions.

NATIONAL TUBERCULOSIS ASSOCIATION. *Second preliminary report of committee on mortality from tuberculosis in dusty trades. New York, 381 Fourth Avenue, September, 1919. 24 pp.*

The first preliminary report of this committee, which was submitted to the executive committee of the National Tuberculosis Association at its meeting in Pittsburgh, December 5, 1918, and published by the Working Conditions Service of the United States Department of Labor, was noted in the July, 1919, issue of the MONTHLY LABOR REVIEW, page 288.

PEOPLE'S YEARBOOK AND ANNUAL OF THE ENGLISH AND SCOTTISH WHOLESALE SOCIETIES, 1920. *Third year of publication. Manchester, England, Cooperative Wholesale Society (Ltd.), 1 Balloon Street, 1920. 401 pp. Illustrated.*

Contains statistics of the Cooperative Union and of societies in the various European countries, as well as articles on the Cooperative Party, housing, and town planning, and one by Sidney Webb, on the Poor Law. For a review of the operations of the societies belonging to the Cooperative Union see pages 131 and 132 of this issue of the MONTHLY LABOR REVIEW.

PHILLIPS, H. D. *Cooperative marketing in the Chautauqua-Erie grape industry. Ithaca, N. Y., September, 1919. 94 pp. Illustrated. Cornell University, Agricultural Experiment Station, Memoir 28.*

SAGET, JEAN-BAPTISTE. *Le problème de l'habitation à bon marché en France et à l'étranger. Thèse pour le doctorat, Université de Paris. Paris, 1919. 267 pp. Bibliography.*

The first part of this book is devoted to a study of the formation and development of the industrial society of Mulhouse which first undertook to solve the problem of providing cheap dwellings for workers in France; the second part takes up French housing legislation; the third, the problem as it is dealt with in other countries, and the fourth offers a solution of the question through municipal action.

SCOTT, J. W. *Syndicalism and philosophical realism. A study in the correlation of contemporary social tendencies. London, A. and C. Black (Ltd.), 1919. 215 pp.*

ŠEČEROV, SLAVKO. *Economic phenomena before and after war. A statistical theory of modern wars. New York, E. P. Dutton & Co., 1919. 232 pp. Bibliography.*

An exposition of the theory that modern wars are caused by unstable economic equilibrium which is caused by variation in the proportional growth of population, production, and consumption. These variations and their effect on the peace of nations or the world are shown by economic statistical data showing changes in conditions in pre-war, war, and post-war periods.

SELLEY, ERNEST. *Village trade-unions in two centuries. London, George Allen & Unwin (Ltd.), 1919. 183 pp.*

An account of the beginning of trade-unionism among agricultural laborers in England in 1833 and of the chief events in the history of such unions down to the present time. Tables giving average rates of pay in specified years and groups of years, from 1837 to 1910 and 1907 to 1917, and minimum rates in 1918 and 1919, as well as cost-of-living tables, are appended.

SHADWELL, ARTHUR. *Coal mines and nationalization. London, Longmans, Green & Co., 1919. 32 pp. (Reprinted from The Times.)*

THOMAS, JOHN. *The economics of coal. From the coal seam to the consumer's cellar. With special reference to the reports of the Coal Industry Commission (British). With foreword by Frank Hodges. London, Independent Labor Party, 1919. 24 pp. I. L. P. pamphlets, new series, No. 16. Price, 3 d.*

UNITED MINE WORKERS OF AMERICA. *Constitution of international union, adopted at Cleveland, Ohio. Effective January 1, 1920. Cleveland, 1920. 70 pp.*

VERBAND DER GASTWIRTSGEHILFEN. *Protokoll über die Verhandlungen des 9. Verbands-Tages. Berlin, 1919. 128 pp.*

The minutes of the ninth general meeting of the German Federation of Hotel, Restaurant, and Café Employees, held at Hanover September 23 to 27, 1919. The resolutions adopted by the meeting demanded the continued combating of the tip system, the strict observance of the eight-hour day, and a two years' apprenticeship for waiters and one of three years for cooks. The meeting also adopted new by-laws and regulations for the grant of strike, unemployment, sick, and funeral benefits.

—. *Statut und Unterstützungs-Reglement. Beschlossen auf dem 9. Verbandstag in Hanover. Berlin, 1919. 31 pp.*

The by-laws and benefit regulations adopted by the ninth general meeting of the German Federation of Hotel, Restaurant, and Café Employees.

VILLATE-LACHERET, MADAME. *Les inspectrices du travail en France. Paris, 1919. 142 pp. Bibliography.*

This treatise on the subject of women inspectors of labor in France, which was the author's thesis for her doctorate in the college of law of the University of Paris, covers the laws creating the positions of women inspectors, conditions governing their employment, their power, their relations both to employers and workers, the results which have been obtained, and proposed reforms.

WADE, SIR CHARLES G. *Australia. Problems and prospects. Oxford, England, The Clarendon Press, 1919. 111 pp.*

Chapters of special interest are on industrial and social problems and land settlement. In the first of these the author traces the history of industrial arbitration in Australia and from this history deduces a few leading propositions for the framing of industrial tribunals. These propositions include the following:

(1) Such tribunals should be composed of experts and practical men, representing both employer and employee, with a chairman who is firm but conciliatory. * * *

(2) Such tribunals should be permanent, that is to say, always available in case of emergency. * * *

(3) To secure the above objects of expert knowledge and prompt action, it follows that a board should be appointed for every substantial trade.

(4) It is essential that these tribunals shall be free from political influence of any kind. * * *

(5) I have come to the conclusion, after a long personal experience, that the introduction of penalties, either in the form of imprisonment or of fine, is an illusory protection.

MONTHLY LABOR REVIEW

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WASHINGTON

MAY, 1920

Laws and Agreements Governing Working Conditions Among American Seamen.^a

A SPECIAL meeting of the General Conference of the International Labor Organization of the League of Nations is to be held at Genoa in June to deal with questions relating to seamen, for which the governing body of the International Labor Office has prepared the agenda.¹ This conference will meet under the conditions specified in the articles of the treaty governing the conferences of the International Labor Organization, and each member of the organization will be entitled to appoint four delegates, two of whom shall represent the Government, the remaining two being chosen from the most representative employers' and workers' organizations. Each delegate may be accompanied by two advisers for each item on the agenda. Since this conference will deal exclusively with questions relating to seamen, it is considered desirable that Government and non-Government delegates should be fully competent to deal with maritime affairs.

A questionnaire prepared by the International Labor Office has been submitted to the various Governments and interested persons. The answers of the Government of the United States to this questionnaire have been made by the Department of Labor and present a summary of the general working conditions of American seamen. In the majority of cases it has been impossible to follow the classification under 1 of the preliminary note, owing to the fact that the laws are, in the main, general in their scope. It is only when they are specially excepted from the provisions of a law that any particular kinds of vessels are mentioned. This Government has made little distinction in its laws between navigation of inland waterways and maritime navigation, and the same statutes apply to both classes of navigation. A distinction has been made, however, between persons employed on mechanically driven vessels on large lakes or rivers, whose duty is continuous, and those employed on vessels confined to canals or canalized rivers. Navigation on the Great Lakes and the large navigable rivers is governed, in most cases, by the same laws that regulate transoceanic and coastwise shipping. Those who work in vessels confined to canals or canalized rivers are subject to the local laws of the various States. The preliminary note and questionnaire follow:

^a Compiled by M. C. Frincke, jr.

¹ See p. 2.

Conference of Seamen. Questionnaire.

PRELIMINARY NOTE.

In your answers to these inquiries you are requested to bear the following points in mind—

1. Careful allowance should be made in every answer for the distinctions drawn by legislation or custom in your country between the various kinds of vessels; for instance:

(1) Foreign-going merchantmen:

(a) Steamers and other mechanically driven vessels.

(b) Sailing ships.

(2) Coasting vessels.

(3) Tugs and barges not self-propelled.

(4) Fishing boats.

(5) Vessels employed on inland waterways.

2. In your replies, which are invited in order that international agreements and recommendations may be drawn up, you are requested to state how far you think it possible, or advisable, to apply the same general regulations to the various classes of ships, or whether separate arrangements should be made for them.

3. As regards navigation of inland waterways:

(a) Does your Government think that this should be subject to the same regulations as maritime navigation?

(b) Does your Government think it possible to make a distinction between persons employed in mechanically driven vessels on large lakes or rivers, whose duty is continuous, and those employed in vessels confined to canals or canalized rivers?

[It will be recalled that at the Washington Conference during the debate on the Report of the Commission on Hours of Work (Provisional Record, pp. 314-322) attention was drawn by several delegates to the peculiar conditions affecting inland navigation on the Great Lakes of Northern America, the Swedish fiords, and the great rivers of Asia, on which voyages often continue without interruption for several days. In defining the application of the Conventions which may be drawn up in regard to the various items of the agenda, it will be necessary to take these special conditions into account and perhaps to distinguish them from those of river and canal navigation in Europe.]

ITEM I OF THE AGENDA.

*Hours of Labor and their Effect on Manning and Accommodation.*A. *Hours of labor.*

1. Please explain fully the nature of any existing regulations (i) in the national law (ii) in agreements between organizations of ship owners and seamen prescribing the hours of duty for foreign-going seamen.

N. B.—The reply should, where necessary, distinguish between the various classes of seamen (deck hands, engine-room staff and general service) and between the hours of labor while at sea and in port.

2. What arrangements and adjustments does your Government consider necessary for the application to seamen of the 8-hour day and the 48-hour week, as adopted by the Washington Conference?

B. *Manning.*

1. Are there any manning regulations in your national legislation, at any rate for foreign-going vessels?

2. If the principle of the 8-hour day and the 48-hour week were adopted in the mercantile marine:

(a) What modifications do you anticipate in your manning regulations, if you have any?

(b) Does your Government see any objection to the adoption of international manning scales, at any rate for foreign-going vessels?

C. Accommodation.

1. What provision, if any, is made:

(a) By your national law;

(b) By agreements between organizations of ship owners and seamen;

In regard to the amount of cubic space to be allotted to seamen and in regard to their general accommodation?

2. As the application to seamen of the principle of the 8-hour day would probably involve larger crews, what steps would you propose to take, and within what period, to adapt their accommodation to these new requirements?

3. Is it advisable to establish by agreement the international regulation of accommodation for seamen on board ship?

Does your Government think it advisable to fix by international agreements uniform standards of accommodation for seamen on board ship?

ITEM II OF THE AGENDA.**A. Articles of agreement.**

Under what system are seamen in your country engaged?

(a) Are all seamen required to sign articles of agreement? If so, please give particulars of the legal requirements as to the signature of articles.

(b) What provisions exist for insuring the observance of agreements—

(1) By State supervision?

(2) By trade-unions?

(3) By other means?

B. Facilities for finding employment for seamen.

1. Have you in your country any system for registering the service of seamen?

2. Does your national law provide employment exchanges for seamen?

(a) If so, how are they constituted and controlled?

(b) What connection have they with the official authorities who control seamen's employment?

C. Washington conventions and recommendations on unemployment and unemployment insurance.

What provisions or modifications, if any, do you consider necessary for the application to seamen:

(a) Of the draft convention?

(b) Of the recommendations adopted at Washington in regard to unemployment and unemployment insurance?

ITEM III OF THE AGENDA.*Prohibition of the Employment of Children under 14 Years of Age.*

1. What limitations are imposed by your national law on the age at which children may be employed on board ship?

2. What arrangements and adjustments does your Government consider necessary for the application to the mercantile marine of the draft convention adopted at Washington prohibiting the employment of children under 14 years of age?

ITEM IV OF THE AGENDA.*The Possibility of Establishing an International Code for Seamen.*

1. Do you think it possible to establish a kind of international code for seamen?

2. If so, what does your Government consider should be the general principles of an international maritime code as regards the conditions of service at sea?

In particular, should the seamen's contract of employment be brought into line or not with that obtaining generally in the case of other workers: For instance, for discipline, the right to leave their ship in a foreign port, the payment of wages before discharge, etc?

N. B.—The governing body of the International Labor Office, at its meeting in January when the agenda of this questionnaire was drawn up, had this important question brought before it.

The governing body considered it so vast and bound up with so many other problems that the coming international conference would hardly be able to deal with it. In spite of this, it deemed it necessary to retain the question in that agenda for general examination. We should be glad if you would send us forthwith the most complete information available on this subject, particularly on those points which might ultimately give rise to international agreements, in order that the work which will be subsequently necessary may be put in hand.

The discussion of the questions which follow observes the same order as that of the questionnaire, but opinions as to the future policy of this Government are not expressed.

Item I of the Agenda.

Hours of Labor.

IN general it may be said that the principle of the 8-hour day has been accepted by American transoceanic and coastwise shipping and the hours of labor of officers and seamen are now commonly limited by agreements to 8 in every 24. The laws of the United States do not, however make any distinction in kinds of service other than that of officers and seamen, the term "seaman" including "every person (apprentices excepted) who shall be employed or engaged to serve in any capacity on board a vessel" (Revised Statutes, sec. 4612). The statutes provide that the duty of officers shall not exceed 9 hours of any 24 while in port, nor, except in emergency, 12 in any 24 at sea. For seamen in all merchant vessels exceeding 100 tons gross, these same rules prevail, except that while at sea firemen, oilers, and water tenders must be divided into at least three watches and other sailors at least two. Certain days to be recognized as days of rest and holidays are also designated. Fishing and whaling vessels and yachts are exempted from the provisions of this law. The two following statutes comprise all existing legislation on the subject by the Federal Government:

SEC. 2. In all merchant vessels of the United States of more than 100 tons gross, excepting those navigating rivers, harbors, bays, or sounds exclusively, the sailors shall, while at sea, be divided into at least two, and the firemen, oilers, and water tenders into at least three watches, which shall be kept on duty successively for the performance of ordinary work incident to the sailing and management of the vessel.
* * * While such vessel is in a safe harbor no seaman shall be required to do any unnecessary work on Sundays or the following named days: New Year's Day, the Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day, but this shall

not prevent the dispatch of a vessel on regular schedule or when ready to proceed on her voyage. And at all times when such vessel is in a safe harbor, 9 hours, inclusive of the anchor watch, shall constitute a day's work. Whenever the master of any vessel shall fail to comply with this section, the seamen shall be entitled to discharge from such vessel and to receive the wages earned. But this section shall not apply to fishing or whaling vessels, or yachts. [Navigation Laws of the United States, 1919, p. 101.]

SEC. 3. It shall be unlawful for the master, owner, agent, or other person having authority to permit an officer of any vessel to take charge of the deck watch of the vessel upon leaving or immediately after leaving port, unless such officer shall have had at least 6 hours off duty within the 12 hours immediately preceding the time of sailing, and no licensed officer on any ocean or coastwise vessel shall be required to do duty to exceed 9 hours of any 24 while in port, including the date of arrival, or more than 12 hours of any 24 at sea, except in a case of emergency when life or property is endangered. Any violation of this section shall subject the person or persons guilty thereof to a penalty of \$100. Approved May 11, 1918. [Navigation Laws of the United States, 1919, p. 126.]

Various agreements concerning hours have been entered into by the United States Shipping Board, the American Steamship Association, and associations of employees. The working rules agreed upon between these two organizations and the American Association of Masters, Mates, and Pilots and the Neptune Association fix the hours of labor for licensed officers in the home port at 8 a. m. to 5 p. m. with one hour for dinner, and on week days in port, work performed before and after these hours shall be paid at overtime rates. Watch and watch shall be maintained on sailing day and at all outside ports and ports of call. At sea, except in case of danger to the vessel, no mate shall be allowed to work more than 8 hours.² These regulations apply to ocean and coastwise trade, but not to the Great Lakes.

On the Great Lakes the hours of labor are governed by the Federal statutes already quoted. The Lake Carriers' Association, an organization of ship owners representing about 80 per cent of the tonnage on the lakes, refused in 1908 to enter into agreements with the union of seamen.³ This stand was adhered to by the association and most of the other ship owners until the fall of 1917, when a minimum wage schedule was established and the abolition of the continuous-discharge-book system secured through an agreement between the association, the United States Shipping Board, and representatives of the seamen. This agreement has lapsed since the signing of the armistice and is now no longer in effect.

The hours for licensed engineers,⁴ as agreed upon with the Marine Engineers' Beneficial Association and which are effective until Aug-

² Wage scales and working conditions. Trans-Atlantic, Atlantic, and Gulf Coasts. United States Shipping Board. pp. 2, 3.

³ Employment system of the Lake Carriers' Association. Bulletin No. 235 of the U. S. Bureau of Labor Statistics, p. 11.

⁴ Wage scales and working conditions. Trans-Atlantic, Atlantic, and Gulf Coasts. United States Shipping Board. Pp. 3, 4, 5.

ust 1, 1920, are the same as for masters, mates, and pilots, with the further provision that work in excess of 8 hours shall not be performed or paid for unless the work is done upon the written order of the chief engineer, master, owner, or agent of the vessel. An entry shall be made in the log book covering the kind of work, reason for same, and time started and finished, for each time overtime service is performed.

Rules agreed upon with the Eastern and Gulf Sailors' Association,⁵ for unlicensed seamen, fix the same hours of work in port with overtime paid for at special overtime rates, and provide that on vessels carrying more than six men on deck, the wheelmen and lookout men shall be divided into three watches, the remainder of the deck crew to perform any necessary work for a period of 8 hours.

The Marine Cooks' and Stewards' Association⁶ of the Atlantic and Gulf agreed that away from the home port, except for vessels performing daily schedules, the work of employees of the stewards' department (except galley crews) shall be done in 10 hours out of each 24, the galley crew's time to be regulated by the chief cook. Work required between the hours of 8 p. m. and 6 a. m. and, in excess of 10 hours (except for galley crews) between the hours of 6 a. m. and 8 p. m., shall be paid for at overtime rates. Grievances concerning working hours or working of ships are to be settled in the home port and not by stopping work or leaving the ship. These rules were to be effective until May 1, 1920.

The Marine Firemen, Oilers and Watertenders⁷ of the Atlantic and Gulf agreed upon rules effective till May 1, 1920, which included the 8-hour day in port with overtime on week days between 5 p. m. and 8 a. m. and work on Sundays and holidays to be paid for at overtime rates. Wipers are to work two hours on Sundays and holidays at sea. The firemen on ocean-going oil barges shall be divided into three watches, and on ocean-going vessels where coal passers are carried there shall be at least three coal passers and three watches. The law does not permit one man to care for more than four fires on coal-burning vessels.

The United Radio Telegraphers' Association agreed to abide by the same rules as those established for officers; their agreement terminates on August 1, 1920.

Agreements substantially the same in regard to hours of labor as those in effect in the ocean and coastwise trade of the Atlantic Ocean and the Gulf of Mexico have been entered into by seamen's organiza-

⁵ Wage scales and working conditions. Trans-Atlantic, Atlantic, and Gulf Coasts. United States Shipping Board. Pp. 6, 7.

⁶ *Idem*, p. 8.

⁷ *Idem*, pp. 10, 11.

tions on the Pacific coast. These rules were to be effective for one year, from August 1, 1919, to August 1, 1920. The seamen's organizations represented are:

The Licensed Deck Officers' Association, Pacific Coast.

The Marine Cooks' and Stewards' Association of the Pacific Coast.

The Marine Engineers' Beneficial Association.

The Sailors' Union of the Pacific.

The Radio Ship Owners' Service Inc.

While the 8-hour day has been generally accepted by American transoceanic and coastwise shipping there is no demand from the seamen for a 48-hour week, the 56-hour week being considered a matter of necessity considering the nature of work at sea. No further arrangements or adjustments would therefore be necessary for the enactment into law of the 8-hour day as recommended by the Washington Conference.

Manning.

The national statutes state, as regards officers, that there shall be one master for every vessel engaged in ocean or coastwise trade; every vessel of 1,000 gross tons or over shall have on board 3 licensed mates; every vessel of 200 gross tons but less than 1,000 gross tons shall have 2 licensed mates; and every vessel of 100 gross tons or less shall have 1 licensed mate. On the other hand there are no specific requirements as to the number of seamen a vessel must have on board, this matter being left entirely to the discretion of the local steamboat inspectors of the United States Department of Commerce. The number of licensed mates a vessel must have according to the above provisions may be increased in the discretion of the local inspectors.

On merchant vessels of more than 100 tons gross, excepting those navigating rivers, harbors, bays, and sounds, sailors shall be employed for specific duties and shall not be required to work alternately, as in the fireroom or on deck, except in cases of emergency, and no vessel shall depart from any port in the United States unless she has on board a crew of which at least 75 per cent in each department are able to understand any order given by the officers. After the fourth year following the passage of the act in 1915 at least 65 per cent of a vessel's deck crew, exclusive of licensed officers and apprentices, must be of a rating not less than that of able seamen.

In case of desertion or casualty the master must secure if possible an equal number of seamen of the same or a higher rating and report to the United States consul at the first port at which he touches. None of the foregoing provisions apply to fishing or whaling vessels, yachts, or motor boats or to wrecking vessels.

The general statutory regulations relating to the manning of vessels engaged in ocean or coastwise trade are as follows:

Section 4463 of the Revised Statutes of the United States be, and it is hereby, amended [May 11, 1918—Act No. 302] to read as follows:

Sec. 4463. No vessel of the United States subject to the provisions of this title or to the inspection laws of the United States shall be navigated unless she shall have in her service and on board such complement of licensed officers and crew including certificated lifeboat men, separately stated, as may, in the judgment of the local inspectors who inspect the vessel, be necessary for her safe navigation. The local inspectors shall make in the certificate of inspection of the vessel an entry of such complement of officers and crew including certificated lifeboat men, separately stated, which may be changed from time to time by indorsement on such certificate by local inspectors by reason of change of conditions or employment. Such entry or indorsement shall be subject to a right of appeal, under regulations to be made by the Secretary of Commerce, to the supervising inspector and from him to the supervising inspector general, who shall have the power to revise, set aside, or affirm the said determination of the local inspectors.

If any such vessel is deprived of the services of any number of the crew including certificated lifeboat men, separately stated, without the consent, fault, or collusion of the master, owner, or any person interested in the vessel, the vessel may proceed on her voyage if, in the judgment of the master, she is sufficiently manned for such voyage: *Provided*, That the master shall ship, if obtainable, a number equal to the number of those whose services he has been deprived of by desertion or casualty, who must be of the same grade or of a higher rating with those whose places they fill. If the master shall fail to explain in writing the cause of such deficiency in the crew including certificated lifeboat men, separately stated, to the local inspectors within 12 hours of the time of the arrival of the vessel at her destination, he shall be liable to a penalty of \$50. If the vessel shall not be manned as provided in this act, the owner shall be liable to a penalty of \$100, or in case of an insufficient number of licensed officers to pay a penalty of \$500.

That the board of local inspectors shall make an entry in the certificate of inspection of every ocean and coastwise seagoing merchant vessel of the United States propelled by machinery, and every ocean-going vessel carrying passengers, the minimum number of licensed deck officers required for her safe navigation according to the following scale:

That no such vessel shall be navigated unless she shall have on board and in her service one duly licensed master.

That every such vessel of 1,000 gross tons and over, propelled by machinery, shall have in her service and on board three licensed mates, who shall stand in three watches while such vessel is being navigated, unless such vessel is engaged in a run of less than 400 miles from the port of departure to the port of final destination, then such vessel shall have two licensed mates; and every vessel of 200 gross tons and less than 1,000 gross tons, propelled by machinery, shall have two licensed mates.

That every such vessel of 100 gross tons and under 200 gross tons, propelled by machinery, shall have on board and in her service one licensed mate, but if such vessel is engaged in a trade in which the time required to make the passage from the port of departure to the port of destination exceeds 24 hours, then such vessel shall have two licensed mates.

That nothing in this section shall be so construed as to prevent local inspectors from increasing the number of licensed officers on any vessel subject to the inspection laws of the United States, if, in their judgment, such vessel is not sufficiently manned for her safe navigation: *Provided*, That this section shall not apply to fishing or whaling vessels, yachts, or motor boats as defined in the act of June 9, 1910, or to wrecking vessels. [Navigation Laws of the United States, 1919, pp. 125, 126.]

Manning of Merchant Vessels.

In all merchant vessels of the United States of more than 100 tons gross, excepting those navigating rivers, harbors, bays, or sounds exclusively, the sailors shall, while at sea, be divided into at least two, and the firemen, oilers, and water tenders into at least three watches, which shall be kept on duty successively for the performance of ordinary work incident to the sailing and management of the vessel. The seamen shall not be shipped to work alternately in the fireroom and on deck, nor shall those shipped for deck duty be required to work in the fireroom, or vice versa; but

the e provisions shall not limit either the authority of the master or other officer or the obedience of the seamen when, in the judgment of the master or other officer, the whole or any part of the crew are needed for the maneuvering of the vessel or the performance of work necessary for the safety of the vessel or her cargo, or for the saving of life aboard other vessels in jeopardy, or when in port or at sea from requiring the whole or any part of the crew to participate in the performance of fire, life-boat, and other drills. * * *

No vessel of 100 tons gross and upward, except those navigating rivers exclusively and the smaller inland lakes and except as provided in section 1 of this act, shall be permitted to depart from any port of the United States unless she has on board a crew not less than 75 per cent of which, in each department thereof, are able to understand any order given by the officers of such vessel, nor unless 40 per cent in the first year, 45 per cent in the second year, 50 per cent in the third year, 55 per cent in the fourth year after the passage of this act, and thereafter 65 per cent of her deck crew, exclusive of licensed officers and apprentices, are of a rating not less than able seamen. Every person shall be rated an able seaman, and qualified for service as such on the seas, who is 19 years of age or upward, and has had at least three years' service on deck at sea or on the Great Lakes, on a vessel or vessels to which this section applies, including decked fishing vessels, naval vessels or Coast Guard vessels; and every person shall be rated an able seaman, and qualified to serve as such on the Great Lakes and on the smaller lakes, bays, or sounds, who is 19 years of age or upward and has had at least 18 months' service on deck at sea or on the Great Lakes or on the smaller lakes, bays, or sounds, on a vessel or vessels to which this section applies, including decked fishing vessels, naval vessels, or Coast Guard vessels; and graduates of school ships approved by and conducted under rules prescribed by the Secretary of Commerce may be rated able seamen after 12 months' service at sea: *Provided*, That upon examination under rules prescribed by the Department of Commerce as to eyesight, hearing, and physical condition, such persons or graduates are found to be competent: *Provided further*, That upon examination, under rules prescribed by the Department of Commerce as to eyesight, hearing, physical condition, and knowledge of the duties of seamanship a person found competent may be rated as able seaman after having served on deck 12 months at sea, or on the Great Lakes; but seamen examined and rated able seamen under this proviso shall not in any case compose more than one-fourth of the number of able seamen required by this section to be shipped or employed upon any vessel.

Any person may make application to any board of local inspectors for a certificate of service as able seaman, and upon proof being made to said board by affidavit and examination, under rules approved by the Secretary of Commerce, showing the nationality and age of the applicant and the vessel or vessels on which he has had service and that he is entitled to such certificate under the provisions of this section the board of local inspectors shall issue to said applicant a certificate of service, which shall be retained by him and be accepted as *prima facie* evidence of his rating as an able seaman.

Each board of local inspectors shall keep a complete record of all certificates of service issued by them and to whom issued and shall keep on file the affidavits upon which said certificates are issued. [Act of Mar. 4, 1915, sec. 13. Effective on American vessels beginning Nov. 4, 1915; on vessels of foreign nations not covered by treaties Mar. 4, 1916; on vessels of other foreign nations after termination of treaties.]

Undermanning.

In case of desertion or casualty resulting in the loss of one or more of the seamen, the master must ship, if obtainable, a number equal to the number of those whose services he has been deprived of by desertion or casualty, who must be of the same

or higher grade or rating with those whose places they fill, and report the same to the United States consul at the first port at which he shall arrive, without incurring the penalty prescribed by the two preceding sections. This section shall not apply to fishing or whaling vessels or yachts. [Revised Statutes, sec. 4516. Act of Dec. 21, 1898, sec. 1; act of Mar. 4, 1915, sec. 1. Effective beginning Nov. 4, 1915. Navigation Laws of the United States, 1919, pp. 101-103.]

The agreement between the American Steamship Association and the Marine Firemen, Oilers, and Watertenders of the Atlantic and Gulf, an agreement concurred in and approved by the United States Shipping Board, requires all ocean-going vessels of 500 tons gross or over that carry coal passers to carry not less than three coal passers whose sea watches shall be divided into three and in no case is one man to be required to care for more than four fires on coal-burning vessels or 12 fires on oil-burning vessels.

The above rules also establish the standard crew complements in the deck and engine departments on vessels manned by the United States Shipping Board. These rules are also alterable when the circumstances warrant a change. It must be remembered, however, that the rules of this board are in no sense law nor are they obligatory upon other ship owners. They do serve, however, to establish what might be termed the American standard for manning foreign-going ocean and coastwise vessels. The following statement is reproduced from the report of the Marine and Dock Industrial Relations Division of the United States Shipping Board.⁸

Under date of February 1, 1919, the Division of Operations of the United States Shipping Board announced the adoption of the following standard crew complements to be carried in the deck and engine departments of all vessels operated by the Shipping Board:

Deck department.

Position.	Cargo vessels having dead-weight tonnage of—									
	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000	11,000	
Master.....	1	1	1	1	1	1	1	1	1	
Mates.....	3	3	3	3	3	3	3	3	3	
Carpenter.....	1	1	1	1	1	1	1	1	1	
Boatswain.....	1	1	1	1	1	1	1	1	1	
Able seamen.....	4	4	4	6	6	6	7	7	7	
Ordinary seamen.....	2	2	2	2	2	2	3	3	3	
Total.....	12	12	12	14	14	14	16	16	16	

⁸ Marine and dock labor; work, wages, and industrial relations during the period of the war. Report of the Director of the Marine and Dock Industrial Relations Division, United States Shipping Board, submitted to the board as of Dec. 31, 1918. Washington, 1919. Pp. 188, 189.

Engine department.

Position.	Cargo vessels having indicated horsepower of—								
	1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750	3,000
<i>Coal-burning vessels.</i>									
Chief engineer.....	1	1	1	1	1	1	1	1	1
Assistant engineers.....	3	3	3	3	3	3	3	3	3
Deck engineer.....				1	1	1	1	1	1
Storekeepers.....						1	1	1	1
Oilers.....	3	3	3	3	3	3	3	3	3
Water tenders (not carried on vessels unless fitted with 2 or more water- tube boilers).....								3	3
Firemen.....	3	6	6	6	6	9	9	9	9
Coal passers.....	3	3	3	3	3	6	6	6	6
Total.....	13	16	16	17	17	24	24	27	27
<i>Oil-burning vessels.</i>									
Chief engineer.....	1	1	1	1	1	1	1	1	1
Assistant engineers.....	3	3	3	3	3	3	3	3	3
Deck engineer.....				1	1	1	1	1	1
Storekeepers.....								1	1
Oilers.....	3	3	3	3	3	3	3	3	3
Water tenders (not carried on vessels unless fitted with 2 or more water- tube boilers).....								3	3
Firemen.....	3	3	3	3	3	3	3	3	3
Wipers.....	2	2	2	2	2	3	3	3	3
Total.....	12	12	12	13	13	14	14	18	18

In addition to the above, vessels of the Shipping Board carry a supercargo and sometimes one or two clerks. One wireless operator is carried, unless there are over 50 persons on board, in which case the law requires two.

The figures given for firemen, coal passers, and water tenders are subject to some fluctuation, depending on the arrangement of the boilers and bunkers.

Shipping Board vessels carry six or more persons in the stewards' department; but work on the standardization of this department is still in progress (March, 1919).

Accommodation.

The national laws make fairly careful and complete provisions for the accommodations of the crews of merchant vessels of not less than 100 tons register including river steamboats, but excluding yachts and pilot boats. These provisions are found in section 4153, Revised Statutes, which prescribes how much space for the use of the crew may be deducted from the gross tonnage of a vessel in arriving at its register tonnage. Vessels, the construction of which was commenced before March 4, 1915, are required to allow 120 cubic feet to each seaman or apprentice and not less than 16 square feet measured on the floor or deck for each member of the crew. Not more than one berth shall be placed above another. The quarters must be well constructed, ventilated, and properly lighted, and made secure from bilge water. Other legal requirements fix the minimum food allowances and provide for slop chests, medicines, mess rooms,

washing facilities, and warm clothing. Section 4153, Revised Statutes, in part is as follows:

From the gross tonnage of every vessel of the United States there shall be deducted—

(a) The tonnage of the spaces or compartments occupied by or appropriated to the use of the crew of the vessel. Every place appropriated to the crew of the vessel shall have a space of not less than 72 cubic feet and not less than 12 superficial feet, measured on the deck or floor of that place, for each seaman or apprentice lodged therein. The provisions of this act requiring a crew space of 72 cubic feet per man shall apply only to vessels the construction of which shall be begun after June 30, 1895. Such place shall be securely constructed, properly lighted, drained, and ventilated, properly protected from weather and sea, and as far as practicable properly shut off and protected from the effluvium of cargo or bilge water; and failure to comply with this provision shall subject the owner to a penalty of \$500. Every place so occupied shall be kept free from goods or stores of any kind not being the personal property of the crew in use during the voyage; and if any such place is not so kept free the master shall forfeit and pay to each seaman or apprentice lodged in that place the sum of 50 cents a day for each day during which any goods or stores as aforesaid are kept or stored in the place after complaint has been made to him by any two or more of the seamen so lodged. No deduction from tonnage as aforesaid shall be made unless there is permanently cut in a beam and over the doorway of every such place the number of men it is allowed to accommodate with these words, "Certified to accommodate —— seamen."

On all merchant vessels of the United States the construction of which shall be begun after the passage of this act, except yachts, pilot boats, or vessels of less than 100 tons register, every place appropriated to the crew of the vessel shall have a space of not less than 120 cubic feet and not less than 16 square feet, measured on the floor or deck of that place, for each seaman or apprentice lodged therein, and each seaman shall have a separate berth and not more than one berth shall be placed one above another; such place or lodging shall be securely constructed, properly lighted, drained, heated, and ventilated, properly protected from weather and sea, and, as far as practicable, properly shut off and protected from the effluvium of cargo or bilge water. And every such crew space shall be kept free from goods or stores not being the personal property of the crew occupying said place in use during the voyage. [Mar. 3, 1897, sec. 2; Mar. 4, 1915, sec. 6. Effective beginning Nov. 4, 1915.]

That in addition to the space allotment for lodgings hereinbefore provided, on all merchant vessels of the United States which in the ordinary course of their trade make voyages of more than three days' duration between ports, and which carry a crew of 12 or more seamen, there shall be constructed a compartment, suitably separated from other spaces, for hospital purposes, and such compartment shall have at least one bunk for every 12 seamen, constituting her crew: *Provided*, That not more than six bunks shall be required in any case.

Every steamboat of the United States plying upon the Mississippi River or its tributaries shall furnish an appropriate place for the crew, which shall conform to the requirements of this section, so far as they are applicable thereto, by providing sleeping room in the engine room of such steamboat, properly protected from the cold, wind, and rain by means of suitable awnings or screens on either side of the guards or sides and forward, reaching from the boiler deck to the lower or main deck, under the direction and approval of the supervising inspector general of steam vessels, and shall be properly heated.

All merchant vessels of the United States, the construction of which shall be begun after the passage of this act having more than 10 men on deck must have at least one light, clean, and properly ventilated washing place. There shall be provided at least one washing outfit for every two men of the watch. The washing place shall

be properly heated. A separate washing place shall be provided for the fireroom and engine-room men, if their number exceed 10, which shall be large enough to accommodate at least one-sixth of the men at the same time, and have hot and cold water supply and a sufficient number of washbasins, sinks, and shower baths.

Any failure to comply with this section shall subject the owner or owners of such vessel to a penalty of not less than \$50 nor more than \$500: *Provided*, That forecastles shall be fumigated at such intervals as may be provided by regulations to be issued by the Surgeon General of the Public Health Service, with the approval of the Department of Commerce, and shall have at least two exits, one of which may be used in emergencies. [Navigation Laws of the United States, 1919, pp. 29-31.]

Section 4572 (Dec. 21, 1898) provides that "every vessel in foreign or domestic trade shall provide a safe and warm room for the use of seamen in cold weather," but this section is not applicable to fishing or whaling vessels or yachts. (Navigation Laws of the United States, 1919, p. 112.)

It is also provided that "the local inspectors shall, once in every year, at least, carefully inspect * * * each steam vessel within their respective districts, and shall satisfy themselves that every such vessel * * * has suitable accommodations for the crew." (Sec. 4417, Revised Statutes, as amended. Navigation Laws of the United States, 1919, p. 104.)

These laws are all general in their scope and unless otherwise specified therein they apply to all vessels under the jurisdiction of the Federal Government, whether engaged in ocean, coastwise, lake or river transportation.

The national law also makes careful provisions for the supplying of the crews of vessels with proper food, including 5 quarts of fresh water daily. Fishing or whaling vessels or yachts are exempt from these requirements. The following extract from the Revised Statutes shows the nature of these requirements:

SCALE OF PROVISIONS TO BE ALLOWED AND SERVED OUT TO CREW DURING THE VOYAGE.

(Revised Statutes, sec. 4612; act of Dec. 21, 1898, sec. 23; act of Mar. 4, 1915, sec. 10. Navigation Laws of the United States, 1919, pp. 96, 97.)

Article.	Unit.	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Beef, salt.....	Pound			1½		1½		1½
Pork, salt.....	do.		1		1		1	
Canned meat.....	do.	1			1			
Fish, dry, preserved, or fresh.....	do.						1	
Fresh bread.....	do.	1½	1½	1½	1½	1½	1½	1½
Beef, salt.....	do.	1½	½	½	½	½	½	½
Flour.....	do.	4				4		
Corn meal.....	Ounce	4				4		
Potatoes or yams.....	Pound	1	1	1	1	1	1	1
Canned tomatoes.....	do.	½					½	
Peas.....	Pint			½			½	
Beans.....	do.		½		½			
Rice.....	do.		½					½
Onions.....	Ounce	4				4		4
Butter.....	do.	2	2	2	2	2	2	2
Lard.....	do.	1	1	1	1	1	1	1
Dried fruit.....	do.	3				3		
Sugar.....	do.	3	3	3	3	3	3	3
Molasses.....	Pint	½		½		½		½
Coffee (green berry).....	Ounce	½	½	½	½	½	½	½
Tea.....	do.	½	½	½	½	½	½	½
Pickles.....	Pint		1					
Vinegar.....	do.			½				½
Mustard, pepper, and salt sufficient for seasoning.....	do.							

Substitutes.

One pound of flour daily may be substituted for the daily ration of biscuit or fresh bread; two ounces of desiccated vegetables for 1 pound of potatoes or yams; 6 ounces of hominy, oatmeal, or cracked wheat, or 2 ounces of tapioca, for 6 ounces of rice; 6 ounces of canned vegetables for one-half pound of canned tomatoes; one-eighth of an ounce of tea for three-fourths of an ounce of coffee; three-fourths of an ounce of coffee for one-eighth of an ounce of tea; 6 ounces of canned fruit for 3 ounces of dried fruit; one-half ounce of lime juice for the daily ration of vinegar; 4 ounces of oatmeal or cracked wheat for one-half pint of corn meal; 2 ounces of pickled onions for 4 ounces of fresh onions.

When the vessel is in port and it is possible to obtain the same, $1\frac{1}{2}$ pounds of fresh meat shall be substituted for the daily rations of salt and canned meat; one-half pound of green cabbage for one ration of canned tomatoes; one-half pound of fresh fruit for one ration of dried fruit. Fresh fruit and vegetables shall be served while in port if obtainable. The seamen shall have the option of accepting the fare the master may provide but the right at any time to demand the foregoing scale of provisions. The foregoing scale of provisions shall be inserted in every article of agreement and shall not be reduced by any contract, except as above, and a copy of the same shall be posted in a conspicuous place in the galley and in the forecabin of each vessel. Fishing or whaling vessels or yachts exempt. [Act of Dec. 21, 1898, sec. 26. Navigation Laws of the United States, 1919, pp. 96, 97.]

In addition to the various foregoing provisions for the welfare and comfort of seamen, the national laws also make other requirements for their benefit. Sections 4564 to 4568 (Navigation Laws of the United States, 1919, pp. 109, 110) make careful provisions designed to require masters of vessels to maintain an ample supply of fresh water and provisions on board their ships. Medicines and anti-scorbutics are required to be provided by sections 4569 and 4570. (Navigation Laws of the United States, 1919, p. 111.) Certain vessels are also required to carry slop chests and detailed provisions as to their contents are prescribed. (Revised Statutes, sec. 4569, acts of June 26, 1884, sec. 11, and June 19, 1886, sec. 13. Navigation Laws of the United States, 1919, pp. 111, 112.) Provisions for a warm room and clothing are made by the provisions of section 4572 of the Revised Statutes. (Navigation Laws of the United States, 1919, p. 112.)

The rules of the United States Shipping Board for deck and engine-room crews require that proper bedding—mattresses, pillows, spreads, blankets, and linen, etc.—shall be furnished each member of the crew and that the engine-room crew be provided with a mess room. These requirements in practically the same form are also found in the working rules of the various classes of unlicensed seamen. These rules were established by agreements between the United States Shipping Board, the American Steamship Association, and the following organizations of seamen: Eastern and Gulf Sailors' Association; Marine Cooks' and Stewards' Association of the Atlantic and Gulf; Marine Firemen, Oilers, and Watertenders of the Atlantic

and Gulf; Marine Cooks' and Stewards' Association of the Pacific Coast; Marine Firemen, Oilers, and Watertenders of the Pacific; Sailors' Union of the Pacific.

The rules of the last-named association also call for a mess room for the accommodation of the crew which shall be so constructed as to afford a sitting room for all and so situated as to be protected from the weather and the heat and odor from the engine room.

Item II of the Agenda.

Articles of Agreement.

THE seamen of this country are not engaged according to any particular system. The law imposes the duty of providing facilities for the employment of seamen upon the shipping commissioners, but Congress has never appropriated any money to be devoted to this purpose, and as a consequence no such facilities are available. (See Navigation Laws of the United States, 1919, pp. 64, 65, 66.)

All seamen on a vessel destined for a foreign port (Mexico, Canada, and the West India Islands excepted) are required to sign articles of agreement. These documents are a part of a ship's papers and must be signed by the seamen and the master in the presence of a United States shipping commissioner. The articles must contain the nature and duration of the voyage, the number and description of the crew, the time when the seaman is to be on board to begin work, the capacity in which the seaman is to serve, the amount of wages, the scale of provisions, the regulations as to conduct on board the vessel, fines, etc., and stipulations as to the allotment of wages. These requirements are set out more fully in the following extract from the Revised Statutes (sec. 4511):

Agreement to Ship in Foreign Trade.

The master of every vessel bound from a port in the United States to any foreign port other than vessels engaged in trade between the United States and the British North American possession, or the West India Islands, or the Republic of Mexico, or of any vessel of the burden of 75 tons or upward, bound from a port on the Atlantic to a port on the Pacific, or vice versa, shall, before he proceeds on such voyage, make an agreement, in writing or in print, with every seaman whom he carries to sea as one of the crew, in the manner hereinafter mentioned; and every such agreement shall be, as near as may be, in the form given in the table marked A, in the schedule annexed to this title [R. S. 4501-4613], and shall be dated at the time of the first signature thereof, and shall be signed by the master before any seaman signs the same, and shall contain the following particulars:

First. The nature and, as far as practicable, the duration of the intended voyage or engagement, and the port or country at which the voyage is to terminate.

Second. The number and description of the crew, specifying their respective employments.

Third. The time at which each seaman is to be on board, to begin work.

Fourth. The capacity in which each seaman is to serve.

Fifth. The amount of wages which each seaman is to receive.

Sixth. A scale of the provisions which are to be furnished to each seaman.

Seventh. Any regulations as to conduct on board and as fines, short allowances of provisions, or other lawful punishments for misconduct, which may be sanctioned by Congress or authorized by the Secretary of Commerce and Labor not contrary to or not otherwise provided for by law, which the parties agreed to adopt. [Mar. 3, 1897, sec. 19; Feb. 14, 1903, sec. 10.]

Eighth. Any stipulations in reference to allotment of wages, or other matters not contrary to law. [Repealed so far as relates to allotments in trade between the United States, Dominion of Canada, Newfoundland, the West Indies, and Mexico, and coasting trade of the United States, except between Atlantic and Pacific ports, by section 25 of act of December 21, 1898;] (Revised Statutes, sec. 4511) June 26, 1884, section 10; December 24, 1898, section 25. [Navigation Laws of the United States, 1919, pp. 66, 67.]

The following rules shall be observed with respect to agreements (Revised Statutes, sec. 4512):

First. Every agreement, except such as are otherwise specially provided for, shall be signed by each seaman in the presence of a shipping commissioner.

Second. When the crew is first engaged the agreement shall be signed in duplicate, and one part shall be retained by the shipping commissioner, and the other part shall contain a special place or form for the description and signatures of persons engaged subsequently to the first departure of the ship, and shall be delivered to the master.

Third. Every agreement entered into before a shipping commissioner shall be acknowledged and certified under the hand and official seal of such commissioner. The certificate of acknowledgment shall be indorsed on or annexed to the agreement, and shall be in the following form:

State of, County of

On this day of, personally appeared before me, a shipping commissioner in and for the said county, A. B., C. D., and E. F., severally known to me to be the same persons who executed the foregoing instrument, who each for himself acknowledged to me that he had read or had heard read the same; that he was by me made acquainted with the conditions thereof, and understood the same; and that, while sober and not in a state of intoxication, he signed it freely and voluntarily, for the uses and purposes therein mentioned.

Section 4511 shall not apply to masters of vessels where the seamen are by custom or agreement entitled to participate in the profits or result of a cruise or voyage, nor to masters of coastwise nor to masters of lake-going vessels that touch at foreign ports; but seamen may, by agreement, serve on board such vessels a definite time, or, on the return of any vessel to a port in the United States, may reship and sail in the same vessel on another voyage, without the payment of additional fees to the shipping commissioner. [Revised Statutes, sec. 4513, Feb. 18, 1895. June 19, 1886.]

[NOTE.—Section 4511, however, does apply in part to masters of coastwise vessels whose crews are shipped under provisions of the act of Feb. 18, 1895.]

The master shall, at the commencement of every voyage or engagement, cause a legible copy of the agreement, omitting signatures, to be placed or posted up in such part of the vessel as to be accessible to the crew; and on default shall be liable to a penalty of not more than \$100. [Revised Statutes, sec. 4519. Navigation Laws of the United States, 1919, pp. 67, 68.]

Shipment in Foreign Ports Before Consuls.

Every master of a merchant vessel who engages any seaman at a place out of the United States, in which there is a consular officer or commercial agent, shall, before carrying such seaman to sea, procure the sanction of such officer, and shall engage

seamen in his presence; and the rules governing the engagement of seamen before a shipping commissioner in the United States shall apply to such engagements made before a consular officer or commercial agent; and upon every such engagement the consular officer or commercial agent shall indorse upon the agreement his sanction thereof, and an attestation to the effect that the same has been signed in his presence, and otherwise duly made. [Revised Statutes, sec. 4517. Navigation Laws of the United States, 1919, p. 69.]

The legal requirements for the signature of articles of agreement of seamen are somewhat different on sail or steam vessels engaged in the coastwise trade (except between the Atlantic and Pacific coasts), on vessels engaged in foreign trade on the Great Lakes, or on vessels where the seamen are entitled to a share in the profits of a cruise. The chief points of difference are that in this class of trade the articles of agreement do not have to contain stipulations as to the scale of provisions to which each seaman is entitled nor do they have to contain provisions for the allotment of wages. (Navigation Laws of the United States, 1919, pp. 72, 73.)

If a master takes any seaman or mariner to sea on a vessel bound from one State to another nonadjoining State without first signing a contract of agreement as required by law, then the seaman so unlawfully shipped shall be entitled to the highest wages paid at the port where he was shipped and in addition the master will be liable to the payment of a fine of \$20, half of which goes to the seaman. (Navigation Laws of the United States, 1919, pp. 73, 74.)

If a seaman has any cause for complaint he may have his case arbitrated by a shipping commissioner provided the master also consents, in which case his decision is final, but either party may refuse arbitration and resort to action in the Federal courts. (Navigation Laws of the United States, 1919, pp. 85, 86.)

Further protection is accorded seamen by insuring the observance of shipping agreements in so far as they relate to wages, by requiring that seamen be discharged before a shipping commissioner if in America, or a consular officer if in a foreign port. When a seaman is so discharged the master is required to pay the wages due the seaman in the presence of said shipping commissioner or consul. (Navigation Laws of the United States, 1919, pp. 76-78.)

The working rules established by agreements with the seamen's unions provide that in doubtful cases and cases of dispute the employee should do as his officers require and refer the matter in question to the union for settlement.

The Marine Engineers' Beneficial Association, by rule 12 of the working rules agreed upon by them and the ship owners, provides that if, after investigation, it is found that any member of the association was discharged for the observance of the rules, no other member would be permitted to work with his substitute. This association consists of licensed engineer officers.

Facilities for Registering Seamen and Finding Employment for Them.

It is a part of the duties of the shipping commissioners to keep a register of the names of seamen and their characters. The issuance of certificates of service to qualify ordinary or apprentice seamen for a rating as able seamen is intrusted to the boards of local inspectors who are under the Department of Commerce. It is also incumbent upon the local inspectors to keep complete records of all certificates of service issued by them. Penalties are imposed upon any shipping commissioner or clerk who unlawfully demands or receives a fee for his services. The provisions of the laws imposing these obligations are as follows:

Shipping Officers.

The general duties of a shipping commissioner shall be:

First. To afford facilities for engaging seamen by keeping a register of their names and characters.

Second. To superintend their engagement and discharge, in manner prescribed by law.

Third. To provide means for securing the presence on board at the proper time of men who are so engaged.

Fourth. To facilitate the making of apprenticeships to the sea service.

Fifth. To perform such other duties relating to merchant seamen or merchant ships as are now or may hereafter be required by law. [Revised Statutes, sec. 4508.]

In any port in which no shipping commissioner shall have been appointed, the whole or any part of the business of a shipping commissioner shall be conducted by the collector or deputy collector of customs of such port; and in respect of such business such customhouse shall be deemed a shipping office, and the collector or deputy collector of customs to whom such business shall be committed shall, for all purposes, be deemed a shipping commissioner within the meaning of this title [R. S., 4501-4613]. [Revised Statutes 4503.]

The laws prescribe the various periods of service necessary to qualify men to become able seamen. When a seaman has acquired the necessary qualifications to entitle him to serve as an able seaman he may make application to any board of local inspectors for a certificate of service as able seaman. The board of local inspectors after giving the applicant an examination issues him a certificate and records it.

The national law does not specifically provide employment exchanges for seamen, although the placement of seamen was included during the war by the Federal employment offices⁹ as part of their general activities. The United States Shipping Board maintained a recruiting system during the war and still continues its training ships for the purpose of training young men for the sea service, both on its own vessels and on those of other shipowners. In New York City there is maintained what is called the Sea Service Bureau for the placement of seamen, but this is not a Federal employment exchange. The various seamen's unions afford facilities for the securing of

⁹ For discussion of the United States Employment Service, see pp. 127-140.

employment for their members. The transportation companies also make use of various charitable institutions which devote their attention to the needs of seamen.

Washington Conventions and Recommendations on Unemployment and Unemployment Insurance.

The Federal Government has at present no power to establish an all-inclusive system of unemployment insurance. The individual States could do so, but none has taken such action. (Massachusetts and New York have both considered bills on the subject. Other States have conducted or are now conducting investigations.) It is a matter of dispute whether the United States, by becoming a party to the League of Nations, and accepting the draft conventions affecting labor, would thereby acquire the authority under our Constitution to legislate to carry the terms of those conventions directly into effect. Some of our best constitutional lawyers hold that a treaty once entered into becomes "the supreme law of the land" regardless of State legislation to the contrary. The only question to be determined by the Federal Supreme Court, in the view of these lawyers, is whether the subject matter of the treaty is a matter which may properly be referred for international negotiations. Other interpreters of the Constitution hold very vigorously that jurisdiction over labor matters, except in so far as expressly granted to the Federal Government, is among the things "reserved to the States and to the people thereof," and can not be dealt with by the Federal Government by treaty any more than by legislation in the absence of a treaty. The Federal Government could, however, immediately establish an unemployment insurance system taking in all seamen engaged in both foreign and interstate commerce.

It would not be within the power of Congress at present directly to legislate out of existence private employment agencies charging fees for their services. The Supreme Court has declared unconstitutional a law enacted by the State of Washington (U. S. Supreme Court Reports, vol. 37, p. 662; Bulletin No. 246 of the United States Bureau of Labor Statistics, pp. 108-112), which forbade the taking of fees from workmen for securing employment for them. The majority opinion—the court divided 5 to 4—states: "There is nothing inherently immoral or dangerous to public welfare in acting as a paid representative of another to find a position in which he can earn an honest living." The prohibition in question was held by the court to be an arbitrary interference with the right to contract and to carry on business guaranteed by the fourteenth amendment to the Constitution. This decision, however, would in no way interfere with the placing of seamen without charging fees by governmental agencies—such as the shipping commissioners now in existence.

Item III of the Agenda.

Prohibition of the Employment of Children Under 14 Years of Age.

THE age fixed by law (Revised Statutes, secs. 4509, 4510) at which boys may be apprenticed to the sea service is 12 years. The period of apprenticeship terminates when the boy arrives at the age of 18 years. (Navigation Laws of the United States, 1919, pp. 66, 67.) No other limitations as to age are to be found in the statutes. It may be added that in actual practice apprenticeships are very rare and that this method of employing boys in the sea service is seldom resorted to. Boys are not shipped as apprentices but simply as boys, or, if they have the necessary physical qualifications, as ordinary seamen.

In order that the draft convention adopted in Washington prohibiting the employment of children under 14 years of age may be applied to the mercantile marine of this country it would be necessary for Congress to pass a law to that effect.

Item IV of the Agenda.

The Possibility of Establishing an International Code for Seamen.

THE Seamen's Act of the United States, being very much in the nature of a code, demonstrates the possibility of making an international code for seamen.

The requirements of the sea service make it necessary that more stringent disciplinary measures be applied to seamen at sea than to men in other classes of industry. A distinction should be made between the service of seamen while at sea and while in a safe harbor. In the former case suitable penalties should be provided to enforce obedience and the efficient performance of their duties by seamen, but while in a safe harbor seamen should be subject to only such civil liabilities as those to which other classes of workmen are subject. Payment of wages in advance before they are earned should in all cases be prohibited. The existing laws of the United States relating to seamen might be taken as the basis for an international seamen's code. Certain specific provisions could be modified to meet different conditions, but the fundamental principles of justice and fair dealing toward seamen contained in these laws should be retained as the foundation of an international seamen's code.

Price Fixing by the Government During the War.

By C. F. STODDARD.

THE "war powers" of the President of the United States, so frequently referred to as the source of and sanction for all acts of the Chief Executive not expressly granted by the Constitution, are not even referred to in that document, much less are they defined as to nature or delimited as to scope. These indefinite but very extensive powers which have been granted to every war President, and in almost unlimited degree to President Wilson, have arisen out of the necessity for a central executive power in time of national crisis. Justice Story, in his Commentaries on the Constitution, illustrates the wisdom of such a policy in the following language:

Of all the cases in the concerns of government, the direction of war most peculiarly demands those qualities which distinctly exercise the power by a single hand. Unity of plan, promptitude, activity, and decision are indispensable to success, and this can scarcely exist except where a single magistrate is intrusted exclusively with the power.

The very essence of administration is action and it is impossible for a legislative body to act promptly. Quite possibly the "war powers" might have been successfully invoked by the President, had he so desired, for the purpose of devising a complete system of price control and price fixing of "necessary" commodities. President Wilson, however, did not attempt to stretch the already much extended "war powers" over this field. He realized that ample authority to establish and pay fair prices for such material as the Government might need in an emergency had been conferred upon him by the provisions of the National Defense Act (approved June 3, 1916), which empowered him to commandeer manufacturing plants should war needs not be sufficiently met "at a reasonable price as determined by the Secretary of War." This provision of the National Defense Act is as follows:¹

The President, in time of war or when war is imminent, is empowered, through the head of any department of the Government, in addition to the present authorized methods of purchase or procurement, to place an order with any individual, firm, association, company, corporation, or organized manufacturing industry for such product or material as may be required, and which is of the nature and kind usually produced or capable of being produced by such individual, firm, company, association, corporation, or organized manufacturing industry.

Compliance with all such orders for products or material shall be obligatory on any individual, firm, association, company, corporation, or organized manufacturing industry or the responsible head or heads thereof and shall take precedence over all

¹ United States Statutes at Large, vol. 39, p. 213.

other orders and contracts theretofore placed with such individual, firm, company, association, corporation, or organized manufacturing industry, and any individual, firm, association, company, corporation, or organized manufacturing industry or the responsible head or heads thereof owning or operating any plant equipped for the manufacture of arms or ammunition, or parts of ammunition, or any necessary supplies or equipment for the Army, and any individual, firm, association, company, corporation, or organized manufacturing industry or the responsible head or heads thereof owning or operating any manufacturing plant, which, in the opinion of the Secretary of War shall be capable of being readily transformed into a plant for the manufacture of arms or ammunition, or parts thereof, or other necessary supplies or equipment, who shall refuse to give to the United States such preference in the matter of the execution of orders, or who shall refuse to manufacture the kind, quantity, or quality of arms or ammunition, or the parts thereof, or any necessary supplies or equipment, as ordered by the Secretary of War, or who shall refuse to furnish such arms, ammunition, or parts of ammunition, or other supplies or equipment, *at a reasonable price as determined by the Secretary of War*, then, and in either such case, the President through the head of any department of the Government, in addition to the present authorized methods of purchase or procurement herein provided for, is hereby authorized *to take immediate possession of any such plant or plants*, and through the Ordnance Department of the United States Army, to manufacture therein in time of war, or when war shall be imminent, such product or material as may be required. * * *

The compensation to be paid to any individual, firm, company, association, corporation, or organized manufacturing industry for its products or material, or as rental for use of any manufacturing plant while used by the United States, shall be fair and just.

It was not until the Food and Fuel Control Act² was approved (Aug. 10, 1917) that the President was specifically authorized to "fix" prices—the commodities wheat and coal and coke being named. This act also contained the following general provisions, the portions italicized particularly being interpreted as constituting authority to establish prices:

By reason of the existence of a state of war, it is essential to the national security and defense, for the successful prosecution of the war, and for the support and maintenance of the Army and Navy, *to assure an adequate supply and equitable distribution*, and to facilitate the movement of foods, feeds, fuel—including fuel oil and natural gas—and fertilizer and fertilizer ingredients, tools, utensils, implements, machinery, and equipment required for the actual production of foods, feeds, and fuel, hereafter in this act called necessities; *to prevent*, locally or generally, scarcity, monopolization, hoarding, *injurious speculation*, manipulations, and private controls, affecting such supply, distribution, and movement; and *to establish and maintain governmental control of such necessities* during the war. For such purposes the instrumentalities, means, methods, powers, authorities, duties, obligations, and prohibitions hereinafter set forth are created, established, conferred, and prescribed. *The President is authorized to make such regulations and to issue such orders as are essential effectively to carry out the provisions of this act.*

SEC. 2. In carrying out the purposes of this act the President is authorized to *enter into any voluntary arrangements or agreements*, to create and use any agency or agencies, to accept the services of any person without compensation, to cooperate with any agency

² United States Statutes at Large, vol. 40, p. 276.

or person, to utilize any department or agency of the Government, and to coordinate their activities so as to avoid any preventable loss or duplication of effort or funds.

SEC. 4. It is hereby made unlawful for any person willfully to destroy any necessities for the purpose of enhancing the price or restricting the supply thereof; * * * to engage in any discriminatory and unfair, or any deceptive or wasteful practice or device, or to make any unjust or unreasonable rate or charge in handling or dealing in or with any necessities; to conspire, combine, agree, or arrange with any other person * * * (d) to prevent, limit, or lessen the manufacture of the production of any necessities in order to enhance the price thereof, or (e) to exact excessive prices for any necessities * * *.

The President was also authorized, by this act, to license the importation, manufacture, storage, or distribution of any necessary and to prescribe regulations for the issuance of such licenses, the words of the provision being as follows:

SEC. 5. From time to time, whenever the President shall find it essential to license the importation, manufacture, storage, mining, or distribution of any necessities, in order to carry into effect any of the purposes of this act, and shall publicly so announce, no person shall, after a date fixed in the announcement, engage in or carry on any such business specified in the announcement of importation, manufacture, storage, mining, or distribution of any necessities as set forth in such announcement, unless he shall secure and hold a license issued pursuant to this section. The President is authorized to issue such licenses and prescribe regulations for the issuance of licenses and requirements for systems of accounts and auditing of accounts to be kept by licensees, submission of reports by them, with or without oath or affirmation, and the entry and inspection by the President's duly authorized agents of the places of business of licensees. Whenever the President shall find that any storage charge, commission, profit, or practice of any licensee is unjust or unreasonable, or discriminatory and unfair, or wasteful, and shall order such licensee, within a reasonable time fixed in the order, to discontinue the same, unless such order, which shall recite the facts found, is revoked or suspended, such licensee shall, within the time prescribed in the order, discontinue such unjust, unreasonable, discriminatory, and unfair storage charge, commission, profit, or practice. *The President may, in lieu of any such unjust, unreasonable, discriminatory, and unfair storage charge, commission, profit, or practice, find what is a just, reasonable, nondiscriminatory, and fair storage charge, commission, profit, or practice, and in any proceeding brought in any court such order of the President shall be prima facie evidence.*

This licensing provision proved to be a most effective weapon, for unless the prices fixed by the President through any properly authorized agency were adhered to by producers and dealers the licenses could be withdrawn and the offending parties restrained.

A broad interpretation of these provisions of law, together with the exercise of his "war powers," enabled the President to pursue a policy of price determination and regulation which in its effect was the same as though price fixing in its strictest interpretation had been authorized or exercised.

Throughout this article the term "price fixing" is used in a broad sense, including the regulation of prices directly or indirectly by any Government agency. Strictly speaking, the policy was one of price stabilization rather than price fixing.

Price fixing by the Government began in the middle of 1917. The primary purpose was to stimulate production, to insure rapid delivery of supplies, and to prevent extortionate prices, and consequently excessive profits. The stimulation of production was preeminently necessary, and to effect this the prices established were in many instances somewhat abnormal—higher than would otherwise have been the case. In most instances the prices fixed were those to be paid by the Government for by the Allied Governments, but in many cases, notably food and fuel, private enterprises and the public generally were directly benefited. These prices were, as a rule, determined and proclaimed as the result of agreement between the Government and producers and manufacturers, the latter submitting to an inevitable situation from patriotic motives and because of the legislative powers of the Government to commandeer industry if voluntary agreements should fail. As a rule, the price fixed was a maximum, although practically the maximum became the minimum. Metals and metal products furnished the widest field for price fixing, followed by textiles, building material, foods, farm products, drugs and chemicals, and fuel. Attention was first centered upon basic raw material, such as iron ore, copper, and lumber, then upon materials entering into munitions of war, such as sulphuric acid, zinc, and platinum, and finally upon articles needed for general consumption, such as coal, sugar, and flour.

Price-fixing Agencies.

THERE were many agencies which during the period of the war assumed the functions of price fixing. Some of these, for example, the Federal Trade Commission, the War Trade Board, the United States Shipping Board, and various sections of the Army and Navy Departments, established prices only under certain circumstances and on a limited number of commodities connected with their own particular interest, and for this reason their activities will not be considered in this article. With regard to the Army and Navy Departments, it should be emphasized that it was highly important to obtain material and supplies for war purposes, regardless of cost, and the prices determined were in many, perhaps most, instances considerably in excess of the prices that would have been established had there been an opportunity to study all the factors involved and really fix prices that could be regarded as fair to the Government.

The most important price-fixing agencies were the Food Administration, the Fuel Administration, and the War Industries Board, the latter functioning for the most part through its price-fixing committee which was established early in 1918 and which was affiliated with the board but answerable directly to the President.

The Food Administration was created by the President in August and the Fuel Administration in September of 1917, the former under the direction of Herbert Hoover and the latter headed by Dr. Harry A. Garfield, president of Williams College. Protection of the people was the first object of the Food and Fuel Administrations; they followed the commodities all the way from producer to consumer, fixing prices that the Government should pay and that would benefit the public as well.

The War Industries Board and later its price-fixing committee were concerned primarily with establishing prices to be paid by the United States—in short, with the protection of the Government. They did not extend their activities to include retailers, and in only a few instances were wholesalers included. The President, however, had suggested that prices charged by producers to the Government and to private industry should be uniform, and as a result the general public benefited.

Price Fixing by the Food Administration.

THE organization of the Food Administration was extensive and was developed as rapidly as possible after the appointment of Mr. Hoover as food administrator. On August 16, 1917, the President approved the appointment, for each State, of a Federal food administrator whose duty was to assist in the enforcement of the policies of the Food Administration in its efforts to stabilize conditions, to protect honest enterprises against illegitimate competition, and to correct the abnormalities and abuses that had crept into trade by reason of the world disturbance. These local administrators were in turn assisted by "price interpreting boards" in the principal centers of population, these boards consisting of representatives from wholesalers, retailers, and consumers. They were directed to determine fair margins of profit on retail sales and to publish in the local newspapers the prices resulting from their determinations. They were not legally empowered to fix retail prices but the effect was the same, for the prices published were regarded by the public and by retailers as maximum prices.

Fair-Price Committee.

It was definitely announced by the Food Administration that its aim would be to stabilize and not to fix prices, although, as already intimated, the latter was practically accomplished by the application of its power to license producers and large dealers. Although too late to have any effect upon the 1917 production of wheat, it became evident that it would be necessary to establish a fair price for the crop of that year. Accordingly the Food Administration, with the

approval of the President, appointed, on August 14, 1917, the so-called fair-price committee with the one purpose of determining what the Government should pay for the 1917 harvest. Dr. Harry A. Garfield, president of Williams College, afterwards Fuel Administrator, was appointed chairman of this committee, which was made up of representatives of the wheat-producing sections of the country and the consuming public.³

On August 30 a report was submitted to the President recommending a price of \$2.20 per bushel for No. 1 northern spring wheat at Chicago, and the President issued an order based on this determination establishing this as the basic price from which the prices of all other grades were to be determined applicable at each primary market in the country. Taking \$2.20 as the basic price, the prices of other grades at Chicago ranged from \$2.10 for No. 1 humpback to \$2.24 for No. 1 dark hard winter, No. 1 dark northern spring, and No. 1 amber durum. The prices of Nos. 2, 3, and 4 of each grade were fixed, respectively, at 3, 6, and 10 cents less than basic. The differentials between the different primary markets of the United States were as follows: Kansas City and Omaha, 5 cents less than the basic price; Duluth and Minneapolis, 3 cents less; St. Louis, 2 cents less; New Orleans and Galveston, basic; Buffalo, 5 cents more; Baltimore and Philadelphia, 9 cents more; and New York, 10 cents more than the basic price. These prices were later revised.

The following is the text of the committee's report. It indicates the procedure adopted and the reasons therefor, constituting a brief statement of the policy pursued in arriving at the determined price.

TO THE PRESIDENT OF THE UNITED STATES:

The undersigned committee has been asked by you to recommend the price which the Government should pay for the 1917 crop of wheat.

In its deliberations the committee has kept constantly in mind the three following factors:

First. The fact that the United States is at war.

Second. The need of encouraging the producer.

Third. The necessity of reducing the cost of living to the consumer.

The normal laws of supply and demand have been violently interfered with and Congress has undertaken to offset this disturbance by conferring extraordinary powers upon the President to stabilize prices. Each of the foregoing factors grows out of

³ The other members of the committee were: Charles J. Barrett (farmer), president of Farmers' Union, Union City, Ga.; William N. Doak, vice president and national legislative representative of Brotherhood of Railroad Trainmen at Washington. Roanoke, Va.; Eugene E. Funk (farmer and member of firm of Funk Bros. Seed Co.), president of National Corn Association, Bloomington, Ill.; Edwin F. Ladd (college president and professor of chemistry), president of North Dakota Agricultural College, Fargo, N. Dak.; R. Goodwin Rhett (banker and business man), president of Chamber of Commerce of the United States, Charleston, S. C.; J. W. Shorthill (farmer), secretary of National Council of Farmers' Cooperative Associations, York, Nebr.; James W. Sullivan, representative of American Federation of Labor at Washington, Brooklyn, N. Y.; L. J. Tabor (farmer), master of Ohio State Grange, Barnesville, Ohio; Frank W. Taussig (professor of economics), chairman of United States Tariff Commission, Cambridge, Mass.; Theodore N. Vail (capitalist), president of American Telephone & Telegraph Co., New York, N. Y.; Henry J. Waters (college president and professor of agricultural science), president of Kansas State Agricultural College, Manhattan, Kans.

conditions which have received the careful attention of the committee. Chief among them are: That the wheat yield in a great and important section of the country has this year been below the normal; that over against this situation is the crying need among the whole body of the population, especially the wage earners, that the rising tide of costs shall be stayed and reduced as rapidly as possible consistent with the welfare of the producer; that the Government is at the present time engaged in the great task of reducing and stabilizing cost of other staple commodities; that the wheat of the world is abundant for its needs, even disregarding the stores in Russia, but because of lack of shipping and war conditions the burden of supplying wheat to the Allies and to neutral nations rests for the time being upon the United States and Canada.

Your committee has also considered the fact that the Government price for the 1917 wheat crop is in effect a continuing guaranty until the minimum price guaranteed by Congress for the crop of 1918 goes into effect (July 1, 1918). It has considered the relation of the 1918 minimum-price guaranty to the price here recommended. It has also considered the effect which an early termination of the war would have upon the wheat markets of the world.

In reaching its conclusion the committee has been guided by the principles you have announced, that a fair price should be based upon the cost of production for the entire country, plus a reasonable profit. We have relied upon the cost estimates for the crop of 1917 furnished by the United States Department of Agriculture, checked by the results of our independent investigations and the evidence submitted to the committee by producers and their representatives.

The committee has considered the regulations recently established by the United States Food Administration Grain Corporation for the different grades of the wheat through which all transactions in wheat are to be standardized and speculation to be entirely eliminated. Also that profits to the grain dealer, miller, and flour dealer have been regulated and reduced by the Grain Corporation, effecting a material reduction in the cost of flour.

In consideration of the foregoing facts and circumstances, this committee respectfully recommends that the price on No. 1 northern spring wheat, or its equivalent, at Chicago be \$2.20 per bushel.

[Signed by the Committee.]

The Food and Fuel Control Act guaranteed a minimum price of \$2 for the 1918 crop. The price, however, was fixed by the President on February 21, 1918, at \$2.20, the same as had been established for the 1917 crop. On September 2, 1919, the President issued a proclamation naming \$2.26 as the minimum basic price for the 1919 harvest.

To facilitate wheat purchasing, selling, and accounting, and the taking over of the entire 1917 harvest, if necessary to maintain prices determined by the fair-price committee, the Food Administration Grain Corporation was formed with a capital of \$50,000,000. This was, on June 21, 1918, increased by the President to \$150,000,000, the purpose being (1) to enable the Food Administration to make the necessary readjustments in wheat prices at guaranty terminals to cover increases in railroad rates, and (2) in view of the large 1918 harvest to provide the Grain Corporation with the increased

capital necessary to carry out the Government's guaranty to the producers.

There appears to have been no scientific basis for the price fixed by the fair-price committee, no cost accounts were examined, and no statistical computations were made. The figure was reached "in consequence of an almost precipitous desire to increase the wheat supply and also to placate the farmers."

The Food Administration took the position that it had no legal authority to fix prices, so it adopted the method of voluntary agreement. The general policy pursued was to regulate prices, basing them on cost of production, as reported by producers, plus a stipulated margin of profit per unit of output—a margin which soon came to be interpreted as a minimum rather than a maximum. This may be illustrated by reference to the order fixing maximum profits of flour millers at 25 cents a barrel. This method has been criticized as not promoting efficiency of operation and as offering dishonest millers an opportunity and temptation to pad their reported costs, but it has been justified as "the simplest expedient of a rough and ready kind designed to meet the necessities of the situation," and "was perhaps the only method of regulation which offered a fair chance of success. Though surprisingly effective in the main, it led none the less to serious difficulties."⁴

By a campaign for food conservation carried into the homes of the land and by evidences of real effort to protect the public from excessive prices, the Food Administration succeeded in gaining the general approval of consumers and in so arousing public sentiment against the would-be profiteer in foodstuffs that the latter found himself in an unpopular position and was effectively restrained by the desire to retain the good will of his customers. Too much can not be said in support of the very great and effective power of public opinion in this connection, for it kept most private individuals from hoarding and prevented retailers from attempting to reap excessive profits quite as effectively as the fear that their licenses would be revoked.

Licensing.

As already noted, the most effective weapon conferred upon the Food Administration by the Food and Fuel Control Act was the power to require producers and large dealers to procure licenses and to observe certain detailed regulations made applicable to licensees. A severe penalty was provided for failure to comply. By this method maximum prices were established and maintained. The licensing plan was embodied in a presidential proclamation issued on October

⁴ "The wheat and flour trade under Food Administration control: 1917-18," by Wilfred Eldred. *The Quarterly Journal of Economics*, November, 1918, p. 40.

8, 1917, which set forth 20 commodities and their products,⁵ constituting the prime necessities of life, as subject to license.

Subsequently (Nov. 7, 1917) the President issued a proclamation, effective December 10, declaring it a military necessity to license the manufacture and the sale of bread, cake, crackers, biscuit, pastry, and other bakery products. Concerns using less than 10 barrels of flour and meal a month were excepted. Regulations issued under this proclamation forbade unnecessary profits, or charges which might be unjust, exorbitant, unreasonable, or unfair, and stipulated that manipulation by resales, especially if tending to higher prices, would be regarded as unfair.

The object of this licensing provision was to enlist the cooperation of all patriotic men in the various trades so as to eliminate speculation, hoarding, unreasonable profits, and wasteful practices in the great distribution system of the country. It was adopted to provide more effective machinery for the enforcement of the food law, and it unquestionably assisted in enabling the Food Administration to control prices.

Flour and Bread.

During the early summer of 1917 the Allies had been bidding against one another for flour and wheat in a market stripped of its surplus. A barrel of flour, made from wheat for which the farmer got \$7, was sold at \$15 and threatened to go higher. By fixing the basic price of wheat at \$2.20, by the limitation of profits to 25 cents a barrel, as already noted, by the licensing of bakers, etc., and by the establishment by the United States and the Allied Governments of a single purchasing agency, panic prices were made to drop, and with the assurance of a stable price the mills began to do business on a known margin. The immediate effect of these measures was a fall in the price of flour in two months to \$10.50 a barrel. This has been characterized as "an achievement of the first importance, and, whatever the offsets and inadequacies, is sufficient to justify the work of the Food Administration." Government control was exercised in turn over the margin allowed to the

⁵ This portion of the proclamation reads as follows:

It is essential in order to carry into effect the purposes of said act to license the importation, manufacture, storage, and distribution of necessities to the extent hereinafter specified.

All persons, firms, corporations, and associations engaged in the business either of (1) operating cold-storage warehouses (a cold-storage warehouse, for the purpose of this proclamation, being defined as any place artificially or mechanically cooled to or below a temperature of 45 degrees above zero Fahrenheit, in which food products are placed and held for thirty days or more); (2) operating elevators, warehouses or other places for storage of corn, oats, barley, beans, rice, cotton seed, cottonseed cake, cottonseed meal or peanut meal; or, (3) importing, manufacturing (including milling, mixing or packing), or distributing (including buying and selling) any of the following commodities: Wheat, wheat flour, rye, or rye flour; barley or barley flour; oats, oatmeal, or rolled oats; corn, corn grits, corn meal, hominy, corn flour, starch from corn, corn oil, corn sirup, or glucose; rice, rice flour; dried beans; pea seed or dried peas; cotton seed, cottonseed oil, cottonseed cake, or cottonseed meal; peanut oil or peanut meal; soya-bean oil, soya-bean meal, palm oil, or copra oil; oleomargarine, lard, lard substitutes, oleo oils, or cooking fats; milk, butter, or cheese; condensed, evaporated, or powdered milk; fresh, canned, or cured beef, pork, or mutton; poultry or eggs; fresh or frozen fish; fresh fruits or vegetables; canned; peas, dried beans, tomatoes, corn, salmon, or sardines; dried: prunes, apples, peaches, or raisins; sugar, sirups, or molasses.

millers, the jobbers, and the wholesaler. With a constant output of flour and a stable price the administration was able to approach the bread problem. Bakers were required to make only standard loaves weighing $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2, and 4 pounds. They were also obliged to mix wheat middlings, rye, or some other approved ingredient with wheat flour in prescribed proportions. The application of all these provisions had the effect of fixing the price of bread at approximately 10 cents for a 16-ounce loaf.

Sugar.

The Food Administration's policy with regard to sugar was to fix a maximum price or margin by voluntary agreement with producers, thus applying its general policy as previously stated. Shortly after the organization of the Food Administration announcement was made, as the result of a conference with representatives of producers of about 85 per cent of the domestic beet output, that the producers had agreed to sell the 1917-18 crop of beet sugar at \$7.25 per 100 pounds, cane basis, at seaboard refining points. This agreement was later accepted by all the domestic beet sugar interests. The basic price was later increased.

During the latter half of September, 1917, the international sugar committee was formed to arrange for the purchase and distribution of all sugar either for the United States or the Allied Governments, and for the allotment of sugar to neutrals. The Food Administration succeeded in obtaining from representatives of the entire sugar-refining industry an agreement, to continue during the war, not only to obtain their supplies of raw sugar under the direction of the international sugar committee, but also to work on a stipulated margin between the cost of raw sugar and the selling price of refined sugar, thus limiting profits and going a long way toward stabilizing prices and eliminating speculation. They further agreed to refine sugar on a net margin between the cost of their raw material and the selling price of their refined product of approximately 1.3 cents per pound after deducting trade discounts.

Following conferences with Cuban producers over the price of Cuban raw sugar, an agreement was signed on December 24, 1917, fixing a price of \$4.60 per 100 pounds for the new Cuban crop which was then coming in; this amounted to about \$6 at New York. Just prior to this the Food Administration and the Louisiana producers had negotiated an agreement, signed October 23, fixing a price of \$6.35 per 100 pounds for raw sugar at New Orleans. These prices were subsequently increased.

The Western Sugar Refining Co. and the California-Hawaiian Sugar Refining Co., both located at San Francisco, notified the Food Administration that they would make the wholesale price for cane sugar in

the western half of the United States not to exceed \$7.25 per 100 pounds f. o. b. seaboard refining points.

During 1918 the sugar equalization board, incorporated with a capital of \$5,000,000, was organized by the Food Administration to "deal with facility in foreign sugar and thus give the Food Administration better control over both distribution and prices." "The object is to absorb the high peaks of cost in sugar production and to make small margin on the low cost of certain foreign sugars which may be purchased and thus secure an equalization of the price to the public on a lower level than will otherwise be possible." It was estimated that the public would benefit by upward of 1 cent a pound.

Thus the Food Administration exercised control over sugar and stabilized the retail price at from 9 to 10 cents per pound without actually fixing the price at any point from producer to consumer. By effecting agreements with producers the administration was in position to control the prices asked by refiners and subsequently by dealers by virtue of its authority to prevent "excessive prices for any necessities."

Price Fixing by the Fuel Administration.

THE Fuel Administration followed the policy of the Food Administration in appointing State administrators and local committees of citizens—these latter charged with the duty of ascertaining and reporting to the administrator the reasonable retail margin (that is, "the cost of the local distribution at a reasonable dealers' profit") to be allowed, which, when fixed by order, together with the cost at the mine named by the President, the transportation charges and the jobber's commission (when sold through a jobber), would constitute the price to the consumer. It was the purpose of the Fuel Administration to compile these figures with relation to local needs in order that it might, if necessary, apportion the supply of coal with careful regard to the greatest existing needs. Like the Food Administration the procedure of the Fuel Administration in establishing prices for fuel was based upon a plan involving consideration of cost of production plus a fair per cent of profit. The essential difference, however, was that the production costs used by the Fuel Administration were obtained from the Federal Trade Commission, and represented careful first-hand examination of cost accounts such as no other Government agency was empowered to make. The idea was to fix a price high enough to insure to the least favorably situated mine a margin of profit so that it would continue to produce coal.

Upon determination of fair prices for coal the President issued a proclamation effective for bituminous coal on August 21 and for anthracite coal on September 1, 1917.

The bituminous coal prices were based upon a division of the country into 29 districts, in each of which producers were required to market their output at the same price. It was provided that a jobber should not add to the purchase price a gross margin in excess of 15 cents per ton of 2,000 pounds. The maximum rate established for run-of-mine grade ranged from \$1.90 for Alabama big seam coal to \$3.25 for coal in the State of Washington, the average price being approximately \$2.36 per ton. To meet exceptional conditions in outlying fields prices ranging from \$2.15 to \$3.30 for run-of-mine coal were fixed.⁶

The maximum prices for anthracite were as follows:⁷

MAXIMUM PRICES FOR ANTHRACITE COAL PER TON OF 2,240 POUNDS, F. O. B. CARS
AT THE MINE.

Size.	White ash grade.	Red ash grade.	Lykens Valley grade.
Broken.....	\$4.55	\$4.75	\$5.00
Egg.....	4.45	4.65	4.90
Stove.....	4.70	4.90	5.30
Chestnut.....	4.80	4.90	5.30
Pea.....	4.00	4.10	4.35

¹ An order issued by the Fuel Administration, effective Oct. 1, 1917, reduced this price by 60 cents.

It was provided that a jobber dealing in anthracite should not add to his purchase price a gross margin in excess of 20 cents per ton of 2,240 pounds when delivery of such coal was to be effected at or east of Buffalo; 10 cents additional was allowed to be charged if delivery was to be made west of Buffalo.

Method of Fixing Maximum Gross Margins.

On September 30, 1917, the Fuel Administrator announced the method by which the retail coal and coke dealers should fix their maximum gross margins—that is, the difference between the average cost of coal and coke at the retailer's yard, wharf, or siding and the prices at which they are sold to the consumer. Under the plan announced the retailer was to ascertain his retail margin in the year 1915, when more normal conditions prevailed than in the fall of 1917. To this he could add not to exceed 30 per cent of that margin, including his profits at that time. It was provided, however, that in no case should the retail margin added by any retail dealer exceed the average added by him for the same size, grade, and class of business during July, 1917. The Fuel Administration defined the retail gross margin as being the difference between the price charged by retail coal or coke

⁶ These prices were increased by 45 cents a net ton on Oct. 17, 1917, as a result of the wage advance of Oct. 6. On May 25, 1918, the Fuel Administration reduced the prices 35 cents a ton.

⁷ Prices were advanced on Dec. 1, 1917, after the wage increase authorized by the President, by 35 cents a gross ton. There was a further advance on Nov. 1, 1918, of \$1.05 a gross ton, following another wage increase.

dealers to consumers and the average cost of coal or coke to such retailer, f. o. b. cars at his railroad siding, yard, pocket, or trestle, or free alongside his wharf, pocket, or water yard, or the average cost to such retailer at wholesalers' pockets, trestles, railroad sidings, mines, tipples, docks, yards, or wharves, as the case might be. It was directed that this average cost of coal or coke, to which the gross retail margin was to be added, should be ascertained by the dealer for each size and grade on the 1st and 16th of each calendar month, according to a method announced by the Fuel Administration, as follows:

The tonnage and average cost of coal or coke on hand at the beginning of a period is to be combined with the tonnage and average cost of coal or coke received during the period.

Example—Egg Coal.

	Tons.	Total cost.	Average cost per ton.
On hand Oct. 1.....	100	\$600.00	\$6.00
Received Oct. 1 to 15, inclusive.....	300	1,500.00	5.00
Total.....	400	2,100.00	5.25
Sold Oct. 1 to 15, inclusive.....	350		
On hand Oct. 16.....	50	262.50	5.25
Received Oct. 16 to 31, inclusive.....	300	1,425.00	4.75
Total.....	350	1,687.50	4.82

In the above example the average cost per ton of egg coal to which the gross margin should be added for sales during the period October 1 to October 15, inclusive, is \$6; during the period October 16 to 31, inclusive, it is \$5.25; and for sales during the period November 1 to 15, inclusive, the average cost is \$4.82. The same method of computation must be applied by each dealer in ascertaining his average cost of each size and grade of coal or coke.

In July, 1918, the Fuel Administration suggested the fixing of differentials in the prices of crude and of refined petroleum, and in August announced a plan to stabilize the price of crude oil. Coming so close to the end of the war, the effect of this upon prices was not apparent.

Price control by the Fuel Administration was effective. The various factors entering into the production and distribution of coal, such as labor, material, general expenses of operation, and transportation charges, increased very much during 1918, and as a result there were substantial advances to the consumer. The greatest advances, however, occurred after the signing of the armistice, when the restraining influence of the Fuel Administration was considerably modified. Changes in prices to the consumer are shown in the following table, which gives for the United States the average and relative prices, per ton of 2,000 pounds, of bituminous coal and of two grades of anthracite coal in specified months, 1916 to 1920.⁸

⁸ For more complete data on coal prices see MONTHLY LABOR REVIEW for March, 1920, p. 63.

AVERAGE AND RELATIVE PRICES, PER TON OF 2,000 POUNDS, OF COAL FOR THE UNITED STATES IN SPECIFIED MONTHS, 1916 TO 1920.

[1913=100.]

Year and month.	Pennsylvania anthracite, white ash.				Bituminous.	
	Stove.		Chestnut.		Average price.	Relative price.
	Average price.	Relative price.	Average price.	Relative price.		
1913: Average for year.....	\$7.73	100	\$7.91	100	\$5.43	100
1916:						
January.....	7.93	103	8.13	103	5.69	105
July.....	8.12	105	8.28	105	5.52	102
1917: January.....	9.29	120	9.40	119	6.96	128
1918:						
January.....	9.88	128	10.03	127	7.68	141
July.....	9.96	129	10.07	127	7.92	146
1919:						
January.....	11.51	149	11.61	147	7.90	145
July.....	12.16	157	12.19	154	8.10	149
1920: January.....	12.59	163	12.77	161	8.81	162

The extent to which price manipulation might have gone had the Fuel Administration not interfered and fixed what it considered a fair price can only be surmised.

War Industries Board and its Price-Fixing Committee.

THE first agency of any importance in the price-fixing field, after the United States entered the World War, was the War Industries Board, which functioned in this respect largely through its price-fixing committee. Prior to the creation of this board a limited amount of price fixing had been practiced, notably the fixing of prices for lumber by the Council of National Defense as the result of an agreement on June 18, 1917, and the establishment of coal prices for the Navy on June 19, 1917.

The War Industries Board was created by the Council of National Defense, with the approval of the President, on July 28, 1917. Among other things, this board was to give "advice to the several purchasing agencies of the Government with regard to the prices to be paid." The need for such a board was soon apparent. In the autumn of 1917 it was recognized that the country was facing a serious economic situation, due to the inflation of prices of various articles in which a shortage had arisen through the abnormal demands made necessary by the prosecution of the war. The situation was not peculiar to the United States. It had confronted various other nations and had been dealt with through a system of price regulation. The War Industries Board undertook to fix maximum prices of fundamental commodities for the Government, the Allies, and private enterprises. The volume of work required of this board prompted

the President, on May 28, 1918, to separate it from the Council of National Defense and to clothe it with the authority of a separate executive agency. It was stipulated that in the determination of the prices the chairman of the board should be governed by the advice of a price-fixing committee, consisting, besides himself, of the members of the board immediately charged with the study of raw materials and of manufactured products, of the labor member of the board, of the chairman of the Federal Trade Commission, the chairman of the Tariff Commission, the Fuel Administrator, and a representative each of the Army and of the Navy.⁹ The price-fixing committee had no legislative authority to fix prices, but it acted as the personal representative of the President, exercising such prestige or authority as he might have as President of the United States and commander in chief of the Army and Navy. This authority was quite as effective in dealing with the industries as any act of Congress would have been.

In order intelligently to fix prices the committee endeavored to have before it—

1. The history of the industry under consideration for a period of years before the war;
2. Statistics of the capital invested and its relation to turnover or sales;
3. Sales and profits realized;
4. The cost of production;
5. A statement or balance sheet segregating the costs of the most and least efficient producers of each commodity during the year 1917; and
6. As much more recent information regarding cost and prevailing market prices as could be had up to the time prices are to be fixed.

The machinery for furnishing this information was found in the Federal Trade Commission, which through its chairman as member became closely affiliated with the price-fixing committee. The procedure, in brief, was as follows:

After a careful study of the data secured from the Federal Trade Commission the committee called into consultation the representative members of the industry involved, and endeavored by mutual agreement to determine upon maximum prices which would be fair to all concerned. The prices which were fixed for the public were what were known as primary prices at which the manufacturer or producer usually sells and did not follow the commodity into retail distribution. It was the custom to fix prices for a period of 90 days only, as the conditions involving costs were more or less subject to constant change.

⁹ The personnel of this committee was as follows: Robert S. Brookings, chairman; B. M. Baruch, chairman, War Industries Board, ex officio; W. B. Colver, chairman, United States Federal Trade Commission; F. W. Taussig, chairman, United States Tariff Commission; H. C. Stuart, chairman of the Agricultural Advisory Committee; Hugh Frayne, Labor Division, War Industries Board; H. A. Garfield, Fuel Administrator; R. H. Montgomery, United States Army; Commander John M. Hancock, United States Navy.

The rule was to fix a uniform price to be paid by all departments of the Government, as well as by our Allies, and primary prices to be paid by the public, after which the numerous sections of the War Industries Board took up with the industry the question of the allocation of orders to the end that our war needs should have preference, but the committee at the same time endeavored to secure a supply for our most urgent domestic needs.

As production during the war was of first importance, it was the policy in fixing prices to avoid fixing them so low as to eliminate the high-cost producer. This naturally gave the largest and lowest cost producer a somewhat larger profit at times than would have otherwise been permitted, but it was felt by the majority of the committee that in such cases the excess-profit tax would practically absorb the difference. An illustration in point is that of copper where a price of 23½ cents a pound was determined upon, whereas it was known at the time that several large companies had agreed to furnish the Government with copper at 16¾ cents a pound. If there had been no price fixing of any commodity it is probable that the prices at which the largest, and therefore low-cost, producer could sell his commodity would have governed the market, forcing out of business many of the high-cost producers whose production was essential and materially affecting the excess-profit tax returns. It should be emphasized that it was the output of the "bulk line" or marginal producer—that is, the one producing a required commodity in an amount most nearly equivalent to the total needs of the Government and of private industry, as ascertained—that was so badly needed, and the price fixed had to approximate his production cost plus a fair profit. To obtain a maximum output prices had to be high enough to insure the production of a supply sufficient for all urgent needs. Briefly the policy pursued was that of cooperative voluntary price fixing made effective by the impulse of patriotism and by the Government's exercise of certain forms of duress such as fuel discrimination, priorities, licenses, and, if necessary, the commandeering of industries. Price fixing under this form of compulsion was deemed justifiable in order to stabilize industry, to bring out maximum production, to eliminate profiteering, and to effect absolute control of all essential commodities during the war. The method adopted was most effective, and the comparatively low prices which resulted, in face of unprecedented demand both by our own Government and by the Allied Governments, would seem to justify the course. As Prof. Taussig has said,¹⁰ "Soaring prices, speculative advances, manipulation by middlemen, a runaway market—these were the conditions impending and which price fixing was primarily designed to remedy."

¹⁰ "Price fixing as seen by a price fixer," by F. W. Taussig. *The Quarterly Journal of Economics*, February, 1919, p. 213.

Iron and Steel.

While yet a part of the Council of National Defense the War Industries Board was called upon to determine prices that the Government should pay for many essential commodities. Important among these were iron and steel, the initial prices for which were fixed in September, 1917. The control exercised by the Government over iron and steel prices had a very important influence on the course of the market. The following account of price fixing in iron and steel taken from War Industries Board Price Bulletin No. 33 (pp. 19-21) gives an insight into the method adopted for this industry, and at once suggests general considerations that guided the board in its price-fixing policy:

For several months before the policy of price fixing was entered upon, there were discussions and disagreements concerning what prices the Government ought to pay for steel. A controversy arose between the chairman of the United States Shipping Board and the manager of the Emergency Fleet Corporation over the prices to be paid by the Government for structural shapes and steel plates. The manager of the Emergency Fleet Corporation announced on June 16, 1917, that he had agreed "provisionally" upon a price of 3.75 cents per pound for shapes and 4.25 cents per pound for plates, "with the understanding that the committee on raw materials of the advisory commission of the Council of National Defense would later go into the question of costs and determine an equitable return to the steel men." The chairman of the Shipping Board declared that these provisional prices were \$30 a ton higher than prices being paid by the Navy Department for the same material, and that he would sign no contracts at those figures. The steel makers then agreed, pending the final determination of prices, to furnish steel plates at the tentative price of 2½ cents a pound.

The chairman of the Shipping Board joined with the Secretary of the Navy in requesting the Federal Trade Commission to begin an inquiry for the purpose of ascertaining the costs of production, these costs to be used as a basis for determining the prices to be paid by the Government. A similar investigation was being conducted by the Senate Committee on Interstate Commerce as part of an inquiry into the prices at which materials of all kinds should be sold to the railroads. The steel committee of the Council of National Defense had taken up the question of steel prices and was working independently of the other inquiries.

On July 12 a conference was held between the representatives of the iron and steel producers and Government officials, which was regarded as preliminary to fixing prices for Government needs. On September 24, the President approved an agreement between the War Industries Board and the steel men fixing maximum prices on ore, coke, pig iron, steel bars, shapes, and plates, which became effective immediately and were subject to revision January 1, 1918. The price of ore was not reduced; the price of basic pig iron was cut from \$48 per ton to \$33 per ton; the price of steel plates was reduced from 8 cents per pound to 3.25 cents per pound. Other products came under control in the succeeding months, the American Iron and Steel Institute actively cooperating with the Government in the establishment of differentials and in maintaining a due proportion among the prices as they were scaled down.

As part of the policy of price fixing, safeguards were provided against certain commonly predicted evil consequences that were to follow regulation. Fears had been expressed that production would not be maintained when prices were reduced; that producers would protect their profits by reducing wages and so cause labor

unrest; and that charges of unjust discrimination would be made by the public and the Allies if the Government bought steel at less than the prices they were paying. As part of the agreement, therefore, the producers pledged themselves to maintain production; not to reduce wages; and to sell to the Government, the public, and the Allies at the same prices.

The character of the market situation immediately preceding price fixing must be borne in mind in considering the effectiveness of price regulation of iron and steel. The quantity of steel available in the market was small, mill capacity had been sold up for months ahead, and market prices reflected the scramble to secure the unpledged output. These prices charged to the late comers bore no relation to cost of production. Current deliveries on long-time contracts were at prices much less than those in the open market, though large premiums were paid for prompt shipments. The Government was unable to buy at uniform prices, but was letting contracts at the same time for the same material at different figures. The situation had become intolerable; as a satisfactory means of determining prices the uncontrolled market had failed.

The effectiveness of price fixing in remedying some of these evils can not be questioned. Confronted with the situation as it existed in the middle of 1917, price fixing was a wiser expedient than any of the suggested alternatives. It was more direct and more economical than paying the market price and trusting to the excess-profits tax to bring back to the Treasury the extraordinary profits. It was simpler as a matter of administration, and in closer accord with the general policy of the Government than the commandeering of the steel plants. The policy succeeded in bringing about substantial reductions, in giving uniformity to prices, and in stabilizing the market. The control was so effective that in looking back upon the experience the only regret is that the control was not exercised at an earlier date.

On September 24, 1917, maximum prices were announced by the War Industries Board, namely, \$5.05 per gross ton for iron ore (lower lake ports), \$33 per gross ton for pig iron, \$2.90 per 100 pounds for steel bars, and \$3.25 per 100 pounds for plates. With this announcement the market became stabilized at a level lower than that prevailing before the entry of the United States into the war.

Copper.

Copper was another very important commodity demanded by the Government on which the War Industries Board fixed prices. Copper was a metal of prime necessity to the nations at war. In December, 1915, the average price of copper per pound was 20.35 cents; in February, 1916, it was 27.35 cents and did not react below this figure until July, 1917, when the average was 24½ cents. In December, 1916, the average price was 33.84 cents, and this in spite of increase in output. The average price for the first nine months of 1917 was 28.4 cents. On September 21, 1917, the War Industries Board fixed the price of copper to the Government at 23½ cents f. o. b. New York, and this was increased to 26 cents in July, 1918. The price fixed was a compromise, since 25 cents was the lowest price at which producers were willing to sell, and the Government's offer was only 18 cents. The procedure adopted in fixing the price of

copper illustrates the method followed by the War Industries Board and later by its price-fixing committee in fixing prices for a long list of commodities.

First the quantity needed directly for war purposes and for essential industries was ascertained. From schedules of the Federal Trade Commission such data as necessary were obtained as to amount of production and the production cost, the latter being distributed into amounts spent for labor, material, other supplies, and for general expenses. A list of copper-producing companies was then made up, beginning with the company reporting the highest production cost on a pound basis and continuing to the lowest. The production cost of the "bulk line" producer or marginal producer was then taken as the basis for a fair price to be fixed for all copper needed. "As a rule a price was fixed that would 'protect' four-fifths or nine-tenths of the entire output." This was not an inflexible rule, but was quite generally followed.

The first price fixed by the committee (Sept. 21, 1917) was 23½ cents. Thus, companies whose production cost was less than this amount would receive considerably more than what was considered a fair price for their copper, while those companies whose production cost was over 23½ cents would not receive sufficient to make expenses. However, their embarrassment was relieved by the fact that their product was bought by nonessential industries whose requirements had not been considered in fixing the price and who could not therefore purchase copper at the price fixed.

Textiles and Clothing.

Although some articles (18 series) in the cloths and clothing group, notably certain kinds of woolen, cotton, and leather goods, were subject to price control by the War Industries Board, beginning in May, 1918, the effect was not a stabilization of prices of clothing to the consumer. On the contrary, price control was ineffective in this respect. In the group as a whole, the wholesale price index number, as computed by the Bureau of Labor Statistics, rose continuously from May, 1917, to July, 1918, being 173 in the former month and 249 in the latter month, based on the year 1913 as 100. With apparently no prospect of relief in the price of clothing, which during 1917 and 1918 showed a greater advance than any other item of the average family budget, Dr. Royal Meeker, Commissioner of Labor Statistics, was prompted to direct a letter to the President on August 29, 1918, urging him to appoint a textile and clothing administrator in order that some restraining influence in the interest

of the public generally might be brought to bear upon those responsible for the high prices. Dr. Meeker's letter was as follows:

MY DEAR MR. PRESIDENT: I beg leave to suggest that you appoint immediately a textile and clothing administrator to bring about regulation and control of the prices and qualities of textiles and clothing in the same way as the food administrator has regulated and controlled the qualities and prices of foodstuffs. The benefits to the people from the activities of the Food Administration are statistically demonstrable, and the need for a similar policy of regulation and control of textiles and clothing is likewise demonstrable by the statistical method.

The Food Administration began its activities in May, 1917. For your information I inclose a tabular statement showing variations in prices of food and clothing at wholesale and variations in prices of food at retail. The index numbers are calculated on the basis that 1913 equals 100.

Unfortunately, we have no strictly comparable figures showing variations in prices of clothing at retail for the whole country. We do know the changes in prices of clothing in the shipbuilding centers in which we have made cost-of-living studies. The percentage price changes in these cities were computed on the basis that 1914 equals 100 because it was impossible to get dependable price data as far back as 1913.

You will note that the wholesale food index in May, 1917, was 191, while in July, 1918, it was 185, being a *decrease* of more than 3 per cent since May, 1917. On the other hand, the wholesale cloths and clothing index in May, 1917, was 173, while in July, 1918, it was 249, being an *increase* of more than 44 per cent. Surely there is a reason. No one would have the temerity to say that a scarcity exists any more in textiles than in food. Neither has the demand for clothing increased to a greater extent than the demand for foodstuffs. The difference between the decrease of more than 3 per cent in average prices at wholesale of foodstuffs and the increase of more than 44 per cent in the average prices at wholesale of clothing represents the difference between *public* control of prices in the interests of the people and *private* control of prices for the benefit of the private price controllers.

Quite naturally the Food Administration has been able to control wholesale prices much more effectively than retail prices. You will note that the retail food index for May, 1917, was 151 and that there has been a pretty consistent increase in retail food prices from that date to July, 1918, when the retail food index reached 167, showing a percentage increase of more than 10 per cent.

The increase in cost of food in the families studied in our cost-of-living investigation is less than that shown in our retail-food price index, although it is not possible to compare family expenditures in May, 1917, with July, 1918. We are now tabulating the retail prices for August, 1918, of the different items consumed by workingmen's families, as found in the shipbuilding centers included in our budget study. The figures thus far obtained are from southern cities only and show that clothing has increased in price since 1914 by from 91½ per cent to 127 per cent. Furniture and furnishings purchased by workingmen show an increase in these same cities of from 104 to 131 per cent. Expenditures for clothing constituted from 11 to 14 per cent of the total family budget in southern cities and from 15 to 16 per cent of the total family budget in northern cities. Food is, of course, a much more important item, ranging from 45 to 54 per cent of the total family expenditures in southern cities and from 40 to 45 per cent in northern cities. Next in importance to expenditures for food, however, come expenditures for clothing, and prices of clothing have increased already to an alarming extent. Dry-goods merchants are frightening people to death and inducing them to purchase much more clothing than they have any earthly need for by telling them that the prices of the new stocks of clothing are to be much higher than they now are.

I sincerely trust that you will seriously consider my suggestion and at once take steps to transfer the regulation and control of clothing consumption and prices from the hands of private individuals intent on acquiring profits to the hands of a competent public administrator charged with the duty and vested with the authority to see to it that the people obtain standard goods at reasonable prices.

Sincerely yours,

ROYAL MEEKER,
Commissioner of Labor Statistics.

EXHIBIT.

Index numbers of wholesale prices of food and cloths and clothing and of retail prices of food in the United States, January, 1917, to July, 1918.

[1913 = 100.]

Year and month.	Food articles at wholesale.	Cloths and clothing at wholesale.	Food articles at retail.
1917.			
January.....	150	161	123
February.....	160	162	133
March.....	161	163	133
April.....	182	169	145
May.....	191	173	151
June.....	187	179	152
July.....	180	187	146
August.....	180	193	149
September.....	178	193	133
October.....	183	191	157
November.....	184	202	155
December.....	185	206	157
1918.			
January.....	188	209	160
February.....	187	213	161
March.....	178	220	154
April.....	179	230	154
May.....	178	234	158
June.....	180	243	162
July.....	185	249	167

The President replied that he did not believe he had the authority to take the same action in regard to textiles and clothing as he had taken with respect to food and fuel.

Results of the Policy of Price Fixing.

WHATEVER the individual results of the Government's price-fixing policy, it may be said that the Government did succeed in a large measure in preventing extortionate prices for materials needed for war purposes and for other commodities, including primarily food and fuel, essential to the existence of the 105,000,000 people whose cooperation made such a result possible. The achievement of the Food Administration, especially in its efforts to control wheat and its products and to prevent speculative prices by inducing the millers to enter into an agreement not to pay for wheat a price in excess of the fair price established by the Food Administration, presents one of the most important and interesting chapters in the history of price control.

The same, in a more restricted sense because fewer commodities were dealt with, may be said of the Fuel Administration. Next to food, fuel was the most important article subject to control. Without it war industries could not operate. The control of manufactured articles, and, to a degree, of raw material, depended upon supplies of coal and fuel oil. With increased production and an unprecedented demand, prices were bound to rise and not only affect industry but the public as well. To prevent manipulation and speculative advances in this emergency a policy of price adjustment was absolutely necessary and the Fuel Administration, specifically clothed with this authority, acted with promptness and fixed prices which were based on a careful inquiry into the cost of production. In the opinion of some the prices were fixed unnecessarily high. It is believed that an equal or even greater supply than was secured would have been obtained had prices been fixed sufficiently high to encourage production by the more economically situated mines instead of so high as to stimulate the opening of new mines, the reopening of abandoned mines, and the development of uneconomical mines at a large capital outlay.

Some criticism, even among those directly connected with the War Industries Board and its price-fixing committee, was aimed at the policy of the board in fixing prices on the basis of cost of production for the bulk line or marginal producer rather than by the system of pooling, by which low-cost and high-cost producers alike should receive prices in proportion to their several costs, the Government to charge itself with the average cost and, so far as civilians were to be supplied, to charge them the same price. To quote from Prof. Taussig:¹¹

This proposal [pooling] rested mainly on an unwillingness to permit the low-cost producers to secure high gains. Any price paid uniformly to all producers necessarily meant differences in profits. When that uniform price was fixed on the basis of the marginal or bulk line producer, the profits of those favorably placed were not only great, but greater than they would have been under normal conditions. In the essential industries, such as steel and copper, the necessities of the situation called for the maintenance of high cost and inefficient producers whose position under no ordinary circumstances would be dominant. True, it was urged that the high gains for the fortunate producers were likely to be reached by the excess profits tax. But it was also urged that no such tax could be a complete offset, and that it would be wise to proceed at once upon a pooling basis; let the Government's buying price be cost for each several producer, and average cost, not marginal cost, be the basis of any sales made to the public. The Government as well as the public would secure the goods at lower prices.

Justification for the method actually pursued was found in the necessity of stimulating and maintaining output. Great quantities of material were needed by the Government and it seemed absolutely necessary to adopt some method that would encourage the marginal

¹¹ "Price fixing as seen by a price fixer," by F. W. Taussig. *The Quarterly Journal of Economics*, February, 1919, p. 232.

producer whose output was essential. He at all events had to be maintained. A price had to be paid that would induce him to continue in operation.

The merits of the two methods will not be discussed. The first one was adopted and the results seemed to be quite satisfactory. Most of the prices fixed, as already stated, were in reality agreed prices reached in cooperation with the producers concerned. In some instances there were decreed prices which the producers were bound to accept, knowing that the committee could enforce them by a somewhat veiled threat of commandeering and that public sentiment would condemn as unpatriotic those who refused to accept the prices named.

Did Price Fixing Stimulate Production?

One of the objects of price fixing was the stimulation of production. Did it accomplish this end? The War Industries Board Price Bulletin No. 1 (pp. 44-46) gives data intended to show that the result was generally quite satisfactory in this respect. An index number of changes in the physical volume of production is presented for 90 raw materials, including substantially all the staples, computed at 1917 prices. To make sure that the comparison between increase in the production of raw materials and the increase of prices is fair, an index number of prices was made from these same materials, fabricating factors and all. Here, of course, the prices were the variables, and they were weighted each year by the supply forthcoming in 1917. Finally, a third index was made by multiplying the supply of each commodity each year by its average annual price. From the aggregate values thus obtained relatives were computed with the figures for 1913 as the base, since production data for the year ending June 30, 1914, were not available. The result is as follows:

INDEX NUMBERS OF THE PRODUCTION OF RAW MATERIALS, OF THE PRICES OF RAW MATERIALS, AND OF THE ANNUAL VALUE OF RAW MATERIALS PRODUCED, BY YEARS, 1913 TO 1918.

Year.	Yearly production×1917 prices.	Yearly prices×1917 production.	Yearly prices×yearly production.
1913.....	100	100	100
1914.....	99	96	96
1915.....	107	99	106
1916.....	111	117	131
1917.....	114	174	200
1918.....	116	192	225

The general effect of price control by the Government may be best illustrated by the following table, which shows index numbers of 573 commodities brought under formal or informal control at some time during the war compared with those of 793 commodities

whose prices were left uncontrolled. It is unfortunate that a similar showing can not yet be made for specified articles in each group, as this would reflect more accurately the influence of control on prices.

WAR INDUSTRIES BOARD INDEX NUMBERS OF CONTROLLED AND UNCONTROLLED PRICES, 1913 TO 1918.

[Average prices, July, 1913, to June, 1914=100.]

Period.	1913		1914		1915		1916		1917		1918	
	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.	Controlled prices.	Uncontrolled prices.
Year.....	100	102	100	97	102	102	125	124	188	156	197	191
Quarters:												
First.....	97	103	99	99	101	97	115	119	157	141	197	180
Second.....	98	101	98	99	101	101	120	123	194	149	192	189
Third.....	101	101	102	97	102	103	124	124	206	162	199	196
Fourth.....	102	101	100	94	104	109	141	131	196	171	201	199
Months:												
January.....	98	103	99	99	101	97	113	116	151	140	195	178
February.....	97	103	99	99	102	97	115	119	155	142	198	180
March.....	98	103	99	99	101	98	117	121	164	142	197	182
April.....	99	102	99	99	101	99	120	123	183	146	196	187
May.....	98	101	99	98	101	101	121	123	192	149	192	189
June.....	98	101	98	99	100	102	120	124	201	152	189	191
July.....	98	101	98	98	103	103	121	124	209	160	195	194
August.....	102	101	104	98	103	102	125	124	204	162	199	195
September.....	103	102	105	96	101	103	127	125	205	163	204	199
October.....	102	102	101	95	101	106	134	127	198	167	201	201
November.....	102	102	99	94	103	109	143	131	200	172	200	200
December....	101	100	99	94	107	111	146	135	193	174	204	197

It will be seen that the commodities ultimately brought under Government price control had risen more than the uncontrolled list by the time the United States severed diplomatic relations with Germany. The index numbers for the two classes in February, 1917, were 155 and 142, respectively. Further, the commodities afterwards controlled were very much more affected by the declaration of war than the others; they rose about 35 per cent in price between February and July, while the uncontrolled commodities rose nearly 13 per cent. Control was applied, then, to prices which as a group were very high before the Government's economic program was developed. That fact doubtless facilitated the effort to prevent a further advance or even to reduce prices.

Broadly speaking, the effect of price control was to bring down the index number of controlled commodities within the year from 209 (July, 1917) to 189 (June, 1918). After June, 1918, however, the controlled commodities began to rise again, often with the full concurrence of the price-fixing authorities. For at their successive reconsiderations of the prices of given commodities these authorities frequently conceded the necessity for raising their previous maximum prices to offset increased costs of production. Uncontrolled commodities, on the other hand, rose in price steadily month by month

after July, 1917, while the controlled commodities were zigzagging downward. With the first relaxation of the Government control the controlled commodities advanced in price, while the uncontrolled commodities declined.

Those responsible for price fixing never formulated fully the principles underlying their action, and it may be doubted if they were guided by any single principle. The attention given to costs of production in their investigation and conferences, however, indicates the point of view from which they worked and some of the determining considerations. The theory of price fixing implied in their regulations was that the principles of a competitive market should be applied to a market situation in which those principles no longer prevailed. The faith that an uncontrolled market will give "fair prices" rests on the belief that competition will keep prices in a close relation to costs of production. When the conditions of demand are such as to destroy this relation between prices and costs, as they were during the war, unfair prices and unreasonable profits result. It was a matter of keeping the faith, therefore, to apply to prices through price-fixing agencies the same principles which the market would have worked out under normal conditions.¹²

Almost immediately upon the signing of the armistice price control and price fixing were terminated, though agreements were, as a rule, carried out to the end of the period for which made. The War Industries Board was dissolved on January 1, 1919. The Food and Fuel Administrations, though created for the duration of the war, practically suspended operations early in 1919.

¹² War Industries Board Price Bulletin No. 33, p. 21. Washington, 1919.

INDUSTRIAL RELATIONS.

New System of Wage Adjustment for Railways.

THE MONTHLY LABOR REVIEW for April carried an account (pp. 50-57) of the provisions of the new railroad control act with regard to a board for the adjustment of industrial relations in the service. Three members of the board are to represent "the employees and subordinate officials of the carriers," and constitute "the labor group;" three are to constitute "the management group, representing the carriers;" and three, "the public group, representing the public." All are to be appointed by the President, subject to confirmation by the Senate. The last named are to be appointed directly, and the others from nominees submitted by the respective groups. Six names are to be proposed by each group, the nominations to be made and offered in such manner as may be prescribed by the Interstate Commerce Commission, which is also to take steps to determine who shall be classed as "subordinate officials."

The act was approved February 28, and authorized the President to act without nominations in case such were not submitted within 30 days after the passage of the act. This limitation required promptness of action by the Interstate Commerce Commission in formulating regulations, and on March 8 the main draft was promulgated.

The act makes no reference to unions, but the commission accepted the representations of those who were "in a position to speak with confidence and authority" that "the overwhelming majority" of the workers—said to be more than 90 per cent of the employees and subordinate officials—are members of certain organizations, or are represented through them, and agreed to accept their nominations. Inasmuch as but three representatives could be appointed it was decided to group the organizations so as to permit the nomination of representatives of the different classes of employees as far as possible. For this purpose the following groups were made:

Group 1:

- Brotherhood of Locomotive Engineers.
- Brotherhood of Locomotive Firemen and Enginemen.
- Order of Railway Conductors.
- Brotherhood of Railroad Trainmen.
- Switchmen's Union of North America.

Group 2:

International Association of Machinists.

International Brotherhood of Boilermakers, Iron Ship Builders and Helpers of America.

International Brotherhood of Blacksmiths, Drop Forgers, and Helpers.

Amalgamated Sheet Metal Workers' International Alliance.

Brotherhood Railway Carmen of America.

International Brotherhood of Electrical Workers.

Group 3:

Order of Railroad Telegraphers.

United Brotherhood of Maintenance of Way Employees and Railroad Shop Laborers.

Brotherhood of Railway Signalmen of America.

Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees.

International Brotherhood of Stationary Firemen and Oilers.

The accredited representatives of each group were asked to act and agree among themselves as to nominees representative of the group, the three groups not to offer more than six nominees. Nominations, properly signed and accompanied by a certificate that they had been made in accordance with the regulations, were to be transmitted directly to the President.

As to the management group, it was found that the Association of Railway Executives is representative of approximately 95 per cent of the railroad mileage of the country, and is therefore in a position to speak for the carriers in making the desired nominations. These nominations are likewise forwarded directly to the President, with proper authentication.

Who were to be classed as "subordinate officials" was to be determined after notice and hearings of the parties interested, but as the shortness of time made such determination impracticable, and as there was no doubt as to the status and rights of employees, it was thought best not to make a classification of "subordinate officials" lest it might subsequently be found to be unsatisfactory; accordingly the regulations issued March 8 made no provision for their representation. On March 15, however, a public hearing was held for the purpose of determining upon the classes to be included as "subordinate officials," as the term is used in the act. It was decided to include claim agents who must report to a superior before a final decision on claims is reached; engineers of mechanics, including civil engineers inferior in rank to engineers of maintenance of way; foremen not vested with authority to employ, discipline, or dismiss subordinates; supervisors of signals; yardmasters without authority to employ, discipline, or dismiss, but not including those in large and important centers, where such power is vested in the yardmaster; train dispatchers, and storekeepers, whose powers are limited as set forth in regard to foremen and yardmasters. This included all

classes represented at the hearing except traveling auditors and supervisory station agents whose rank and duties were felt to class them more properly as representatives of the companies than as "subordinate officials." The power of revision of the list on due hearing, and as occasion warrants, was expressly reserved.

Also, supplemental regulations setting forth the relation between employees and subordinate officials in the matter of making nominations, were issued on March 23. It was concluded that both classes of persons were entitled to make and offer nominations, even though "the great mass of the railroad employees and subordinate officials are members of or represented through the organizations named" in the original regulation.

Claims to participate in making the nominations were submitted in behalf of certain organizations not included in the groups enumerated in the regulations of March 8. A fourth group was therefore made, including these organizations of employees and also organizations of subordinate officials admitted to make nominations. This group is as follows:

Group 4:

- Railway Men's International Benevolent Industrial Association.
- American Federation of Railroad Workers.
- Order of Railroad Station Agents.
- American Train Dispatchers Association.
- The Roadmasters and Supervisors Association of America.
- National Order of Railroad Claim Men.
- Railroad Yardmasters of America.
- International Association of Railroad Supervisors of Mechanics.
- International Association of Railroad Storekeepers.
- Colored Association of Railway Employees.
- Brotherhood of Railroad Station Employees.
- Order of Railroad Telegraphers, Dispatchers, Agents, and Signalmen.
- Brotherhood of Railway Clerks.
- American Association of Engineers.
- Grand United Order of Locomotive Firemen of America.
- Porters' Union.
- Skilled and Unskilled Laborers (Railway).
- Order of Railway Expressmen.

These organizations were authorized to act through their accredited representatives in making nominations that would represent single organizations, or be jointly representative of two or more, as might be agreed upon. In transmitting these nominations, statements were to be furnished showing the total membership of the organizations taking action, distinguishing between officials excluded by the regulations and subordinate officials permitted to act; also between the latter and employees proper. The percentage of the membership belonging also to any of the organizations named in the regulations of March 8 was to be stated.

The Board Appointed.

NOMINATIONS were submitted in accordance with the methods prescribed by the act and the regulations of the commission, and a list of names was sent to the Senate by the President on April 13, 1920. The delay in forwarding the list was said to be due to the difficulty in securing suitable persons who met the terms of the law. Active membership in a union or pecuniary interest in railroads operates to bar one from eligibility, though the retention of an honorary membership and insurance or other benefit rights does not so operate.

The persons named were: For the labor group, Mr. Albert Phillips, of Ohio, vice president of the Brotherhood of Locomotive Firemen and Enginemen, of Group 1, A. O. Wharton, of Missouri, of the Railway Employees' Department of the American Federation of Labor, and Mr. James J. Forrester, of Ohio, president of the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, of Group 3; for the management group, Mr. Horace Baker, of Ohio, formerly general manager of the Cincinnati, New Orleans & Texas Pacific Railroad, Mr. J. H. Elliott, of Texas, formerly general manager of the Texas & Pacific Railway Co., and William L. Park, of Illinois, vice president of the Chicago Great Western Railroad Co.; for the public group, Mr. R. M. Barton, of Tennessee, for a number of years a member of the Tennessee court of appeals, Mr. G. Wallace W. Hanger, of the District of Columbia, formerly chief clerk of what is now the United States Bureau of Labor Statistics, and since 1913 assistant commissioner of the United States Board of Mediation and Conciliation, and Mr. Henry Hunt, of Ohio, formerly mayor of Cincinnati.

The Senate confirmed these nominations on April 15, and the board held its first meeting on the following day.

Wage Movement of Organized Railway Employees, 1919-20.

DETAILS of the movement among organized railway employees for increases in their rates of pay are given in various reports¹ published by the chief executives of the railroad organizations, much of this information being contained in correspondence between various officials of the railway unions, the Railroad Administration, and President Wilson.

In February, 1920, there were 17 railroad organizations, representing various crafts affiliated to the American Federation of Labor,

¹ Report of proceedings in connection with 1919-1920 wage movement. Washington, 1920. Circular No. 1, 20 pp., No. 2, 14 pp., No. 3, 14 pp., No. 4, 16 pp., and Official Circular No. 119, Railway Employees' Department, Washington, Apr. 5, 1920.

claiming to represent 95 per cent of the organized employees and to have a membership of 1,900,000. Recently the officers of the Molders' Union of North America authorized the committees of these organizations to represent their membership also in their negotiations. In addition to these unions there are 18 rival unions, comprising a comparatively small percentage of the organized employees, which include in their membership various grades of employees, one or two of them being made up of minor executives such as train dispatchers and station agents.

A letter from Mr. Walker D. Hines, Director General of Railroads, to President Wilson summarizes the claims of the different classes of railroad employees and the reasons actuating the employees in making them.

The demands for substantial wage increases have been presented to the Railroad Administration's Board of Railroad Wages and Working Conditions at different times since the latter part of last summer by nearly all the classes of the 2,000,000 railroad employees. Among the few classes which have not pressed such demands there is insistence that their wages shall be increased if other related classes receive increases. There are two principal causes for putting forward these claims, one the cost of living and the claim that employees in similar industries outside are receiving higher wages, the other a demand for a leveling up by classes which claimed they had not received equal treatment with related work in other departments.

Mr. Hines says:

As illustrating the complexity and wide scope of these matters, the labor members of the board, in suggesting a basis they thought would bring about equalization, estimated that the cost of such equalization would be approximately \$375,000,000 per annum. This figure was arrived at by taking the average monthly increase of a small group of railroad employees, embracing only about 5 per cent of the total number of railroad employees, and estimating how much additional increase in money per month it would be necessary to give the other classes of railroad employees in order to equalize on certain theories with this small group. Even this small group is now demanding large increases. This figure of \$375,000,000 is much less than the employees are demanding. Broadly speaking, the increase of each one cent per hour for all railroad employees of all classes would, with allowance for incidental overtime, cost considerable in excess of \$50,000,000 per year. The following indicates the principal, but not all, of the contentions advanced by the principal classes of the railroad employees involved:

The Brotherhood of Railroad Trainmen:

Passenger brakemen be increased from \$120 per 30-day month to \$150 for 26-day month.

Baggagemen be increased from \$124.80 for 30-day month to \$160 for 26-day month.

Assistant conductors be increased from \$144 for 30-day month to \$179 for 26-day month.

Freight brakemen in valley territory be increased from \$4.08 per day to \$5.88 per day with 10 per cent increase over these rates wherever the grade exceeds 1.8 per cent.

Yard foremen or conductors be increased from \$5.33 per day to \$7.20 per day.

Yard helpers or brakemen be increased from \$5 per day to \$6.90 per day.

Switch tenders be increased from \$4 per day to \$5.90 per day.

Also time and one-half for all Sunday and holiday service.

Also guaranty of 26 days per month for regular employees in all classes of service.

The Order of Railway Conductors:

Passenger conductors be increased from \$180 per 30-day month to \$225 for 26-day month.

Through-freight conductors be increased from \$5.40 per day to \$7.65 per day in valley territory, with increases in the mountain rate from \$5.81 to \$8.37 per day.

Local-freight conductors be increased from \$5.92 to \$8.33 per day in valley territory, with increase in mountain rate from \$6.26 to \$9.13 per day.

The Brotherhood of Locomotive Firemen and Enginemen:

Road freight firemen to be increased an average of \$1.84 per day over present rates.

Yard freight firemen to be increased an average of \$2.25 per day over present rates.

Passenger firemen to be increased from present average rate of \$4.31 per day to \$6.50 per day, an increase of \$2.19 per day.

The Brotherhood of Locomotive Engineers:

While presenting no specific requests, notice was served that the engineers desired increases in wages proportionate to any increases granted other employees.

All road employees, as distinguished from yard employees, in the four foregoing organizations, get proportionately increased pay per day when they make mileage in excess of 100 miles and in freight service get time and one-half for time consumed in excess of what would be required on the guaranteed speed basis which is 2½ miles per hour.

The Switchmen's Union of North America:

Foremen or conductors be increased from \$5.33 per day or night to \$8 per night and \$7.50 per day.

Helpers or brakemen be increased from \$5 per day or night to \$7.50 per night and \$7 per day.

Switch tenders to receive same rate as helpers.

Time and one-half for Sundays and holidays.

Maintenance of Way and Enginehouse Laborers:

Rate for all mechanics in the maintenance of way department to be increased from basic rate of 53 cents per hour to uniform rate of 68 cents per hour.

Rate for all trackmen and other laborers to be increased from rates running from 28 cents to 40 cents per hour to a uniform rate throughout the United States of 50 cents per hour. The bulk of these employees now receive between 35 cents and 40 cents.

Brotherhood of Railroad Signalmen of America:

An increase of approximately 10 cents per hour for each class of signal employees.

The Brotherhood of Railway Clerks:

An increase in pay of at least 20 cents per hour retroactive to January 1, 1920, and in addition thereto the reestablishment of differentials between certain classes of employees.

Also the immediate elimination of the 43-cent per hour maximum rate established by the present wage orders for freight handlers and other labor in freight houses, storerooms, etc., and time and one-half for Sundays and holidays.

The Order of Railroad Telegraphers:

That the rates received by telegraphers on the Southern Pacific System, which was stated to be practically the highest in the United States on any important railroad, shall be taken as a basis, the rates of all other telegraphers put on the same basis, and then an increase of 17 cents per hour added to rates so established. The equalization alone, leaving out the addition of the 17 cents per hour additional, would cost the

railroads approximately \$13,000,000 per annum, and the 17 cents per hour increase would mean \$36,000,000 per annum additional.

Shopmen:

Increase to approximately 85 cents per hour, for employees now generally receiving 67 and 72 cents per hour.

These demands have now been formally presented to the Railroad Labor Board² created by authority of the new transportation act.³

The Kansas Court of Industrial Relations.

THE MONTHLY LABOR REVIEW for March (pp. 214 and 215) carried a summary statement of the provisions of a law of Kansas establishing a court of industrial relations. Because of the purpose of the court to adjust differences between employers and employees, the account of the law was printed under the general heading "Conciliation and Arbitration." Contemporaneously, Gov. Allen, of Kansas, in an address on the subject of the law, said: "The law creating the Industrial Court in the State of Kansas is not a distant relative of the process of arbitration or conciliation." There is no representation of capital as such, nor of labor as such, but "the court represents the public in the function of government." The method and spirit of the court are of special interest, therefore, as exemplifying a departure from those commonly applied in such cases.

The first decision rendered by this new court bears date of March 29, 1920, and relates to the wages of linemen employed by the Topeka Edison Co. This company furnishes light and power for various citizens and industries of Topeka and Oakland and for the street car systems of the two cities, and was therefore within the scope of the law as a public utility. The case was before the court on the complaint of the attorney general of the State and of four members of the local union of electrical workers to which the employees concerned belonged. The controversy related to hours and wages, and the complainants prayed for a due investigation and ascertainment of the facts, and that such orders and findings may follow as may be just and reasonable.

The company's reply admitted its incorporation and the nature of its business, and also the existence of an unsettled controversy, setting forth its tender of a partial concession to its workers and their rejection of the same. While denying certain allegations of its employees, it "respectfully submits and tenders the issue here presented, and welcomes the good offices of this court in a judicial determination of that which is equitable and just in the premises."

² See p. 49.

³ See MONTHLY LABOR REVIEW, April, 1920, pp. 50-57.

Of this the opinion says:

It would seem, therefore, that while originally this matter was filed as an action upon a controversy, under the compulsory features of the industrial laws of the State of Kansas, it is now before the court more in the nature of a voluntary submission by mutual agreement of a dispute between the above parties.

There was found to be little conflict in the evidence submitted by the two parties. The men were skilled, first-class workers, of unquestioned fidelity, and were engaged in an occupation involving serious hazards. For several years prior to 1916, the customary wage had been \$2.75 per day. In 1916 an advance was made to \$90 per month of 26 days, for a 9-hour day. In May, 1919, a basic 8-hour day was adopted, with a rate of 60 cents per hour, time and one-half for overtime, and double rates for Sunday work. There was a practice of counting time on the job only, though the men had to report at the storehouse, collect material and tools, and travel varying distances on a truck to reach their work. This practice had come into question, and during the progress of the trial it was mutually agreed to count the time both going and coming as well as in the storehouse, and that employer and workers would share this equally.

It was testified that living costs had so advanced that \$4.80 at the present time did not have the purchasing power of either the \$2.75 per day or the \$90 per month, when these were the wages paid. A comparison with rates paid for like work in localities of similar population, and for other work of a comparable nature as to skill, etc., in Topeka was also made. The seven basic principles of the recent Federal railroad law were recited, i. e., wages for similar work elsewhere, cost of living, hazards, skill required, responsibility, character and regularity of employment, and inequalities due to prior adjustments. To these the courts added an eighth: "The skill, industry, and fidelity of the individual employee."

It was pointed out that the law did not use the term, a "living" wage, but a "fair" wage, while also having regard for a "fair rate of return to the owners." Workers of the class under consideration were said to be "in all fairness entitled to a wage which will enable them to procure for themselves and their families all the necessities and a reasonable share of the comforts of life," including intellectual advancement and recreation, the education of their children, and opportunity to provide for sickness and old age. It was also stated that the law allows only the fixing of a minimum wage, leaving the maximum to "depend upon the skill, fidelity, and industry of the employee, the fair and equitable disposition of the employer, the prosperity of the business, and other economic circumstances."

The men had asked for an advance of 10 cents per hour over the 60-cent rate they had been receiving; and with an agreement reached as to

time in the storehouse and on the road, this was really the only point to be decided. The court issued its order ratifying the agreement made, and fixing the rate of pay at 67½ cents per hour for an 8-hour day, time and a half for overtime, and double time for Sunday work, this rate to be the minimum for six months from April 1, unless changed by agreement of the parties with the approval of the court.

On April 23 there were three other cases pending before the court affecting the Amalgamated Electric Workers of Pittsburg, Kans., the firemen and oilers of the Union Pacific Railway, and the maintenance and shop laborers of the Atchison, Topeka & Santa Fe. The court is also conducting a general investigation of the coal-mining situation in the State with a view to stabilizing employment and securing a fuller production. If continuous operation is impracticable such arrangements are to be considered as will work to the advantage of miners in the matter of alternative employments at certain seasons of the year.

British Report on Dock Labor.

THE court of inquiry (instituted under the Industrial Courts Act)¹ set up by the Ministry of Labor, on the joint application of the Port Labor Employers and the Transport Workers' Federation, to investigate the claims of the dockers to a minimum wage of 16s. (\$3.89, par) per day and changes in working conditions, presented its report to the Government on March 31.

The court met first on February 3, with Lord Shaw of Dunfermline as president, and was composed of Messrs. Harry Gosling and Robert Williams (president and secretary, respectively, Transport Workers' Federation), and Mr. Ben Tillet, M. P. (secretary, Dockers' Union) representing the workers; Sir Joseph Broodbank, Sir Lionel Fletcher, and Mr. Frederick Scrutton, representing the employers; and Mr. John Smethurst (president, Master Cotton Spinners' Federation) and Mr. A. Pugh (general secretary, Iron and Steel Trades Confederation), nominated by the ministry of labor as representing employers and workers in other industries.

Messrs. N. Macpherson and G. H. Ince were the secretaries. Mr. E. Revin (national organizer of the dockers) and Mr. James Sexton, M. P. (leader of the Liverpool dockers), were in charge of the case for the workers, while Sir Lynden Macassey, K. C., and Mr. Bruce Thomas, instructed by Mr. G. Grinling Harris, secretary to the employers' committee, were counsel for the employers.

Witnesses from every interested group of people in the United Kingdom appeared at the hearings. The twentieth and final session

¹ See MONTHLY LABOR REVIEW, February, 1920, pp. 41-46.

was held on March 11, but the report was delayed in publication until the president could no longer hope for a unanimous signature.

Regret is expressed that two of the employers' representatives were unable to sign the majority report, as this was the first inquiry under the Industrial Courts Act and it was hoped that a full and public inquiry would facilitate agreement and thus effectively strengthen confidence in the method. The court has power only to make recommendations, but if all parties had agreed to them the probability of their being adopted would be greatly increased.

The majority report concedes practically the whole of the claim made by the dockers. It reviews and discusses the conditions of the industry from every point of view, covering more or less definitely the casual nature of the work, unemployment, underemployment, mode of payment, the representation of labor on port authorities, lack of confidence between employers and employed, labor-saving machinery, decline of output, and other matters. The actual recommendations are a minimum national rate of 16s. a day, a system of registration, the maintenance of unemployed casual labor, weekly pay, and Whitley councils for dock labor, with well-defined powers.

One of the two employers signing the majority report made the reservation (a vital one) that while recommending a substantial increase in wages he could not agree to the establishing of a minimum daily wage. The two signers of the minority report, both employers, objected to the proposal to establish a national minimum wage, and also to the proposed amount, 16s. (\$3.89 par). They base their objections on the ground of the effect on the higher grades and on other industries, owing to the deep-rooted insistence of workers to maintain their differential position. Further, they see many practical difficulties in the way of establishing weekly payments of wages in every port; and, while approving the principle of national joint councils, they do not consider such a question within the scope of the reference to the court; and, finally, they do not consider that the court was called upon to suggest a direct representation of labor on the governing port bodies.

The minister of labor, to whom the report is addressed, is under no obligation to give effect to the conclusions of the court, nor has he power to enforce them, but he informed the parties that if they so desired he would call a joint conference to consider the proposals. Delegates of the unions concerned immediately passed resolutions accepting the majority report; but if, as the minority report suggests, the employers refuse to accept the court's proposals a further dispute may arise.

The report is of especial interest at this time in the United States, owing to the long-standing disturbed condition of dock labor along

the Atlantic coast. The following summary is taken from the London Times of April 1, 1920:

THE FINDINGS.

The findings of the court are as follows:

- (1) That with a view to establishing a national minimum standard (to use the words of the claim) the minimum for day workers and pieceworkers shall be 16s. [\$3.89 par] per day on the basis of the national agreement for the 44-hour week.
- (2) That a system of registration of dock labor should be introduced into all the ports, docks, and harbors of the kingdom.
- (3) That the principle of maintenance of unemployed casual labor is approved.
- (4) That wages of dock labor should be paid weekly, and that this system should be introduced at the earliest possible date.
- (5) That the constitution of a national joint council and its correlative and local bodies should be undertaken for the dock labor industry on the lines of the report of the Whitley committee.
- (6) That these bodies should, failing agreement by the parties, be charged with the settlement of the incidental matters mentioned in this report and of the remaining items of claim.

The powers of many of the port and harbor authorities concerned to impose tolls and charges are regulated by statute. If effect is given to the recommendations contained in this report these authorities may find it necessary to have their powers amplified. The court accordingly recommends that the Government should give immediate facilities for the enactment of the alterations found necessary in the statutory powers of such authorities.

The main portions of the report (White Paper 55, price 3d.) are as follows:

The application contained claims under 10 heads, and it was in the hope of a settlement of these that this court of inquiry was set up. The first of the claims was in the following terms: "That the minimum for dayworkers and pieceworkers shall be 16s. per day on the basis of the national agreement for the 44-hour week."

It became evident that there were public considerations which pointed to the great advantage of a report being given at the earliest date on this head. The court could not be blind to the fact that unrest upon a considerable scale might be allayed by such an individual answer, if promptly given. It addressed itself accordingly to limiting the inquiry in the first instance to this issue, so as to enable the results to be communicated ad interim to the ministry.

Upon the other issues to be settled, reliance was placed upon the good sense and good will of the parties in the direction of adjustment of matters of difference. As things have turned out, and after a full investigation, which was conducted with keenness, but without acrimony, there seems good ground to hope that that reliance will be justified.

Interpretation of Minimum.

The language of the claim is open to a wide construction. Sir Lynden Macassey was well within his rights in interpreting "a minimum" as a universal national minimum which swept away all considerations of special circumstances and which admitted of no exception. In amplification of the grotesque results which he argued might follow from such a settlement, a table was put in of the small ports of the Kingdom, and it was added that there were in addition 874 creeks, estuaries, etc., in which loading and unloading and other forms of labor such as that performed by one or other of the grades of dock laborers took place. In the opinion of the court the matter must be approached by both parties in a sensible and practical spirit.

It would be improper to compare the minimum now asked to be set up with the lowest figure of wage obtained in the scheduled ports. A great evening-up of underpaid work will take place, and the parties indicated that, once the principle of the minimum was settled, this could be done by them without difficulty. In London, for instance, the Port of London Authority pays 11s. 8d. [\$2.84 par] per day, whereas ocean shipowners pay 13s. 9d. [\$3.35 par] per day, while in Glasgow the general rate of payment of a docker is 14s. [\$3.41 par] per day. It may be noted that the pledge given on behalf of the men was in these terms (to use the words of Mr. Bevin addressing this court):

"I am conscious that whatever your decision may be, if the principle of the minimum be established, some people in some ports are going to get more on the first settlement than others. We have faced that, and we have discussed it with the whole of our men. It was assumed by the chairman of the employers at the previous meeting, to take a striking illustration, that if Liverpool received 12s. [\$2.92 par] per day and Glasgow 14s. [\$3.41 par], if you decided on 16s. [\$3.89 par] a day Glasgow would say '18s., because I was above Liverpool before.' That is not so, my Lord. That is clearly understood by every member of the federation in every port in the country."

In these circumstances, to start with 11s. 8d. [\$2.84 par] as a general datum of difference with 16s. [\$3.89 par] while ignoring all the other cases of higher wages and lesser differences would be productive of serious error.

Output and Casual Labor.

It became plain as the inquiry proceeded that the question of a minimum wage could not be dissevered from two other considerations directly bearing upon it. The first of these had reference to the serious problem of output, and the second to the problem—equally serious—of casual labor. Both of these things are not only vitally connected with the dock labor, but they are also of deep importance to the industrial and social well-being of the community at large.

Their bearing on the issue was quickly made clear. Unless increase of output could be obtained, the ports, it was contended, might be confronted with such a situation of financial strain as might seriously cripple trade, and destroy all the advantages which might be supposed to follow the fixing of the high minimum asked. The result might be to paralyze the very industry whose progress and development it was the interest of both parties to promote. As to casualization, it met the court at every turn as a specialty which bore fundamentally upon the main wages question.

Standard of Living.

The true and substantial case presented by the dockers was based upon a broad appeal for a better standard of living. What is a better standard of living? By this is not meant a right to have merely a subsistence allowance, in the sense of keeping the soul and body of the worker together, but a right to have life ordered upon a higher standard, with full regard to those comforts and decencies which are promotive of better habits, which give a chance for the development of a greater sense of self-respect, and which betoken a higher regard for the place occupied by these workers in the scheme of citizenship. The court did not discourage this view; on the contrary, it approved of it; and it is fair to the port authorities and employers to say that its soundness was not questioned. In the opinion of the court the time has gone past for assessing the value of human labor at the poverty line.

Cost of Living.

On behalf of the workers a figure of £6 [\$29.20 par], and on behalf of the employers a figure of £3 13s. 6d. [\$17.88 par] out of London and £3 17s. [\$18.74 par] in the London area was presented to the court as the expenses of procuring a decent standard

of life for a family of man and wife and three children, and Prof. Bowley defended these latter figures with great ability. * * * The claim made is for a minimum daily wage of 10s. [\$3.89 par] It has been difficult to obtain accurate information as to the exact number of hours or, say, of half-days worked per week by the docker who comes under the ordinary denomination of a casual worker. It appears to the court, however, that that average may stand at about 8 half-days out of the 11. The 16s. per full day claimed would, on this average, reach a sum of £3 4s. [\$15.57 par] per week. Upon the footing that the workmen obtained work and continued at work, however, during the whole of the 11 half-days, a sum of £4 8s. [\$21.41 par] would be reached.

Casual Labor.

It was strongly contended that the minimum now to be set up would be pointed to as the ground for claims in other industries. This may be the case, no doubt, but the following consideration has to be kept in view: Dock labor is in a very large proportion uncertain labor. The employees in that branch of industry often run the risk of finding themselves without work at the end of any day, or even any half-day. This raises the whole question of casual labor, and it has serious relations to the claim of the workers.

The court is of opinion that labor frequently or constantly underemployed is injurious to the interests of the workers, the ports, and the public, and that it is discreditable to society. It undermines all security, and is apt to undermine all self-respect upon the workers' part. It is only among those who have sunk very far, and whom the system itself may have demoralized, that it can be accepted as a working substitute for steady and assured employment. In one sense it is a convenience to authorities and employers, whose requirements are at the mercy of storms and tides and unforeseen casualties, to have a reservoir of unemployment which can be readily tapped as the need emerges for a labor supply. If men were merely the spare parts of an industrial machine, this callous reckoning might be appropriate; but society will not tolerate much longer the continuance of the employment of human beings on those lines.

The system of casualization must, if possible, be torn up by the roots. It is wrong. And the one issue is as to what practical means can be adopted of readily providing labor, while avoiding cruel and unsocial conditions.

So serious has the position become that it has evolved habits of mind and body on the part of the workmen themselves which are detrimental to them and on a wide scale deeply injurious. Many workers have got into the habit of thinking that day labor is a sign of independence, and that labor secured even for a week leaves them devoid of that liberty to do nothing which they have come to prize. As in so many other cases mentioned in this report, this habit of mind is in no respect sanctioned by the leaders of the men, and, as properly urged by them, one of the true lines of reform in this trade will be the abolition of the daily wage system and the substitution therefor of the payment of wages weekly.

Weekly Payment of Wages.

The practical difficulty in the way of this conversion is that men have become habituated to subsistence money so as to enable them to avoid hunger. A notable pledge was made by the representative of the claimants, to the effect that if a weekly payment of wages were instituted—which it was agreed would carry in its wake responsibility on the part of the workman for making his own subsistence a matter for thrifty outlook—the leaders of the men would counsel the abolition of the old bad hand-to-mouth habit of pay. With the assistance of a joint industrial council and the correlative local bodies to be hereafter recommended, the court does not think that the ministry need fear the elimination of the old method.

As matters stand, however, the daily wage asked to be fixed is the wage of a class upon the footing that this unemployment and underemployment, lamentable as they may be, do actually exist. Casualization, in short, and that on a large scale, seems to have become part and parcel of the dock industry, and this has been accentuated since the outbreak of war. It was, and it remains, one of the most appalling problems which confront all those engaged in social amelioration or philanthropic effort. Since the war it has reached the dimensions of a serious social disease. The spectacle of men, who, after all, have the obligations of citizenship resting upon them, being assembled at the dock gates, uncertain whether they are to enter the ranks of labor for even half a day or be left a prey to those temptations which spring from idleness, poverty, and a sense of neglect, is not one which can be treated by any independent and humane mind with equanimity.

REMEDIES.

Registration.

The beginning of a remedy, and the condition of it, is a system of registration of all workers at the docks.

Maintenance.

It is not for this court to enter into these details. As bearing, however, on the financial question before it, it feels that it is its duty also to record its view in favor of the adoption of the principle of maintenance. The amount can be settled by the parties or upon reference to the industrial council machinery already alluded to. It may be pointed out that once maintenance is part and parcel of a registration scheme, the objections to registration may quickly disappear. The court accordingly reports its opinion that registration and maintenance should both be adopted, and this in regard to all the labor employed at all the ports of the Kingdom.

Output.

The court now finds itself bound to face the question of output. It confesses its view to be that this question is of more importance than the claim itself. It desires to state broadly that unless a reasonable hope can be entertained that output shall be largely increased, it remains extremely doubtful whether the industry could justifiably be charged with the amount of the claim put forward. The court, however, is of opinion that such a reasonable hope exists; and it thinks it to be its duty to submit to the Government the result of its investigation and labors upon this topic. The radical connection between output and the wages claim is this: Witness after witness indicated that the increased debit for wages was a thing which the industry could stand if only output were attained.

Payment by Results.

In order to facilitate the desired output of which the country stands in imperative need, attention should be given to the system which has given satisfaction in many of the aspects of dock labor, namely, payment by results. It is understood that payment by results is impracticable in some aspects of dock and waterside labor, but, where practicable and desirable, consideration should be given to the extension of the system. The court recommends to the joint industrial council the consideration of the extension of this system of payment by results.

It need not be concealed that great alarm is felt on the subject throughout the country, and by port authorities themselves. It would be a mistake on a very large scale to lay the blame for all the decrease of output upon the men. No unprejudiced hearer of the evidence would venture to do so. Various causes, in addition to the reduction of hours to 44 per week, have contributed toward this disastrous result.

RESPONSIBILITY FOR LOSS OF OUTPUT.

(1) *Government Departments.*

In the first place it is right to begin with the action of the Government departments themselves. Congestion at the ports of this Kingdom means immediate loss and possibly suffering to all who are either consumers of produce or engaged in commerce. The chairman of the Port of London Authority roundly charged Government departments with producing congestion by a lack of due consideration either for the requirements of our people or the accommodation of our ports.

It is not for this court to enter into any controversies between Lord Devonport and the departments or between the departments themselves, or to permit any political considerations or political utterances to divert its mind from the one issue, which was very serious, namely, the production of confusion, delay, and disorganization at the port to such an extent as to increase the hazards of the employment, its uncertainties, and the amount of casualization. In the opinion of the court such an increase did occur.

(2) *Port Authorities and Employers.*

The next class of persons to some extent responsible with regard to the loss of output are the port authorities and the employers themselves. The court can not see its way to make any pronouncement derogatory to these institutions and classes of citizens who share with the great bodies of men employed the credit that under their aid and by their efforts the trade of this country has risen to its enormous dimensions. Nor would anyone desire to observe upon the handling of traffic and upon the administration of trade at our ports during the war without a grateful realization of the enormous services which, in combination with the shipping industry of the country, were rendered during the war. It will never be forgotten how those authorities and that industry faced calamities of unforeseen dimensions in the loss of ships and difficulties in the commandeering of property in ports and on the high seas by the Government which might well, under less able and courageous management and work, have imperiled the continued existence of our world-wide commerce, of the supplies of the necessities of life to our island people, and in particular of that entrepôt trade which is the envy of the world.

Representation of labor on authorities.—The port authorities and employers are engaged in daily contact with enormous bodies of men, and with a system, to which they can not be blind, under which the fringe of unemployment is great and underemployment is greater. In the opinion of the court the organization of all the ports in the Kingdom would be strengthened by the admission of or an increase in the direct representation of labor on the governing bodies. It appears to the court manifest that the labor situation might be ameliorated, conditions of labor might undergo advantageous reform, and loss of output might be avoided, if the direct representation here recommended in principle were introduced.

Absence of confidence.—There is, in short, a fact of much significance which the parties and the Government have to face, namely, the absence of confidence between employers and men. * * * While the war has undoubtedly raised the public estimation of the value of dock labor, it has unfortunately, with all its confusions, prevented employers and authorities from devoting the attention which might otherwise have been given to the problem still outstanding and still serious of the amelioration of the conditions of labor. That such conditions require to be ameliorated no one can doubt. When it is mentioned that men failing to obtain labor at 8 o'clock in the morning and driven onto the streets or back to their homes for five hours till the next chance comes, with no certainty even then of any other result, and when

it is remembered that there does not appear even yet to exist on any appreciable scale within the docks, ports, and harbors of our Kingdom any refuge, place of rest, or even proper or sufficient canteen accommodation, although in the case of thousands of men their homes may be miles away from their place of labor, it will be seen that a sense of umbrage is almost bound to linger, manifesting itself, it may be, in breaches of contract which are in terms indefensible.

Industrial councils.—No proper machinery has existed which could mitigate this conflict or smooth a way for the arrangement of differences and the removal of troubles; the task has been hard in many cases upon employers relying upon contracts being obeyed, but finding themselves, in the absence of such machinery, up against hostilities which might otherwise have been removed. It is in this view that the court thinks that the time is ripe for the immediate formation of a joint standing industrial council applicable to the dock workers of the United Kingdom, and for district councils and works committees, all as set forth in the invaluable report of the committee presided over by the distinguished chairman of committees of the House of Commons, the Rt. Hon. J. H. Whitley, M. P.

Labor-saving machinery.—On this subject the court is pleased to note that no difference in policy was suggested by the parties to the issue. Much enlightenment was displayed on the subject on both sides, and it appears fairly clear that the old suspicions as to the introduction of new methods, up-to-date machinery, even the mobility of labor from dock to dock, and other matters of avoidable friction, have disappeared, and that with the introduction of these councils and a better remuneration for labor, employers will be enabled with greater security than before to bring all the ports of this country in point of organization and appliances up to the level of the best equipped ports in the world.

The court reports its opinion that it is within the power of port authorities, more particularly if representative working men are taken into counsel upon the subject, to make some provision for positions being found for labor displaced. Were this done, the course of bringing the industry and the particular ports up to date and so putting our trade abreast in its working conditions with the best in the world would be facilitated. The loss which would thus arise in any port by our being outrivalled by the adoption of more advanced methods elsewhere would be avoided.

(3) *Men.*

The court desires to report with equal frankness upon the responsibilities of the men themselves. The court is unwilling to enter upon isolated cases of breach of contract however gross. * * *

There are, however, breaches of contract which most unhappily are of a far wider and more general scope; one, a failure to give the contract time, and the other a deliberate slowing down of the work. Both of these cases of breach of contract are extremely serious, and they have an effect which the outside public fails to realize of lessening the output of work to such an extent, as, in the opinion of the court, materially to increase the charges upon industry and the prices of supplies to our people.

Failure to give contract time.—The case of a breach of this contract is so general and widespread as to have become in the case of a large percentage of all the dockers in the Kingdom almost a habit. It is chiselling off, so to speak, of fractions of time at the beginning and end of each half day. * * * In a word, it has, in the opinion of the court, been established that the agreed upon 8-hours day has been improperly and in violation of the bargain reduced by 1 hour. Apart from the exceptional cases just alluded to nobody excuses this, and the court is happy to record that the tradeunions as such and the whole body of their officials have no complicity with

this departure. When it is reflected that the body of men engaged who are actually through their leaders parties to the present issues before the court numbers 125,000, it is not difficult to see that the loss, taken in the gross, which thus occurs to all concerned and in particular to the consuming public, is bound to be heavy.

A moderate estimate would appear to be that with regard to 25 per cent of the number of workmen employed the loss alluded to occurs. This means that in each ordinary working day in the ports of this Kingdom 31,250 hours are lost of labor which is of the utmost value not merely to the prosperity of the ports but to the needs of the nation. As a matter of figures, it may be added that to convert that loss into a yearly one our people at large suffer in the course of twelve months from this system to the extent of 9,375,000 hours.

Slowing down of output.—Upon the second point the course of enlightenment does not seem to have made the progress which might have been anticipated. The court can not be blind to the fact that there is, not arising from exceptional causes but as a part of a deliberate policy, the adoption in not a few cases of a system of slowing down of output. Blame in this respect can only be imputed to a minority of the men interested in this inquiry. The great majority see the system in its true light. The system known as "ca' canny" is loss on every side. The workman gains nothing in time. Even with regard to his habits and character, as well as the dignity of his calling, the things which to every decent man are really precious, loss and deterioration and injury occur. It must need be so under a system which substitutes for honest work a scheme of make-believe. To take the illustration given it is not a case of short time in the apparent bulk, it is time adulterated just as in the other case, say, the case of a merchant, who would make up weight by moistening his sugar or mixing it with sand. There is one answer, and only one, to all such devices: Honesty forbids.

The system may be difficult to eradicate; it may need courage and great manliness to resist the temptations to it. Yet the court is impressed with the fact that the responsible leaders of the men do not sanction it, and treat it not only as wrong, but as a mistake.

Minimum standard.—To trade thus situated it does seem a strong demand that a claim for 16s. a day should be made upon the part of labor; but to labor, situated as described, it seems a natural and just thing to demand that its conditions should be made to square with the circumstances and the pressing and vital needs of the hour as already described. After much consideration the court has come to the opinion that the claim of 16s. per day should be conceded, on the footing that the hopes held out on behalf of the men of increased output shall not be frustrated; that on this footing the claim is supported by justice and should be granted as is now recommended by this court, with a broad appeal to the honor of the men.

Industrial Conditions in Belgium in 1919.¹

THE Belgian ministry of industry, of labor, and of provisioning has just completed a survey of the status of unemployment and of the extent to which various Belgian industries had recovered in December, 1919. The investigation was conducted jointly by the administration of mines and the labor inspection service, the former considering conditions in the extractive and metallurgical industries, and the remaining industries being covered

¹ Extracted from Commerce Reports for Mar. 17, 1920. Department of Commerce, Washington.

by the labor inspectors, whose inquiry was extended to all establishments employing more than 20 workmen in 1914. Comparisons are made on the basis of production and employment on corresponding days in December, 1913, and December, 1919. It is obvious that comparisons made on the basis of one day's output may be somewhat misleading in certain cases.

At first glance the results of the investigation are discouraging from the standpoint of comparative labor output. From the standpoint of actual production in comparison with prewar output, they indicate, however, the remarkable industrial revival already commented upon by all recent visitors to Belgium. The effect of the general introduction of the eight-hour day and of the large amount of work necessary to restore plants and mechanical equipment in some industries is shown by the following figures:

In December, 1919, the production of the coal mines was 94 per cent of what it was in 1913 although labor employed amounted to 104 per cent of the prewar figure. Coking plants were producing 37 per cent as much as before the war, while employing 53 per cent as many as in 1913. Plants for making briquets for the railways and other industrial uses attained 98 per cent of the prewar production, with an increase of 9 per cent over the prewar labor force.

The poor showing made by the iron and steel industry is no doubt attributable to the unusually severe damages suffered by such plants and the consequent necessity of employing large numbers in rebuilding and repairing foundries and mills and in installing new machinery or stolen equipment recovered from Germany. With 60 per cent of the prewar personnel, the iron foundries and steel mills produced in December only 34 per cent as much as before the war, but this was a considerable increase over preceding months.

Still more serious is the condition of the zinc foundries, whose production in December was only 18 per cent of the prewar production with 54 per cent of the labor employed in 1913. Special difficulties in obtaining ores and other raw materials are probably responsible for this large proportion of labor to output. The production of lead was only 9 per cent of the 1913 total, while copper production was about 28 per cent. In the quarries, an important and very diversified Belgian industry, production was slightly less than 50 per cent with a personnel of about 54 per cent.

According to the finding of the Administration of Mines, 115 establishments, including coal mines, coke and metallurgical plants, and quarries of various kinds, gave war destruction as the chief reason for subnormal production, 80 plants specifying lack of transportation facilities, 52 lack of adequate coal, 49 labor shortage, 30 reduction of working day, 23 lack of raw materials other than fuel, and 33 (all quarries) lack of orders.

Nonemployment and Nonemployment Allowances by Government.

ACCORDING to the investigation of the Labor Inspection Service, which ignored production figures, the labor employed in all other Belgian industries in December, 1919, represented 70 per cent of the 1913 total of 412,462 workmen. Half of the establishments covered were employing at least 75 per cent of their prewar personnel.

In the food industries 89 per cent of the former personnel was employed, in the construction industries 86 per cent, in the glass industries 81 per cent, and in the paper trade 78 per cent. Other percentages, based on 1914 employment figures, are: Chemical industries, 74 per cent; ceramic products, 71 per cent; furniture and wood-working, 66 per cent; textiles, 61 per cent (general average reduced by slump in the linen industry); tanneries, 58 per cent. Transportation of various kinds engaged 7 per cent more operatives than in 1913, although the traffic on the State railways is by no means equal to the prewar volume.

It is interesting to note that the industrial revival has apparently progressed most favorably in the Province of Liege, the center of the steel and zinc industry, where 80 per cent of the former workers are employed.

In the Province of Brabant, which includes Brussels, the proportion was 78 per cent, and in Hainaut, the largest coal-producing region, and also an important steel center, 76 per cent. As was to be expected, it is in West Flanders, which suffered most of the actual war devastation, that the resumption of work has progressed least, only 48 per cent of the prewar working population being employed.

Taking Belgian industry as a whole, it appears that in December, 1919, 76 per cent of the former personnel was employed. The notable progress made in the year following the armistice is strikingly shown by the chômage allowances granted to the workmen by the Government. In November, 1918, these unemployment pensions amounted to 23,000,000 francs (\$4,439,000, par) per fortnight; in June, 1919, the total was 12,350,000 francs (\$2,383,550, par); while in November, 1919, it had decreased to 5,300,000 francs (\$1,022,900, par).

At that time some 135,000 households, or about 437,000 people, were receiving Government assistance. This figure includes, however, families of soldiers not yet demobilized, widows of soldiers killed in the war, and disabled soldiers. For instance, in the important industrial Province of Hainaut, out of over 16,000 households entitled to the chômage, only 5,688 included families of able-bodied workmen. Assuming that the same proportion prevails throughout the country—and it is probably considerably less than

this—the number of workmen continuing to draw State unemployment pensions would now be about 45,000.

It must be remembered that during the war many Belgian workmen left for England, France, Holland, and other European countries, and that some of them have not yet returned. Furthermore, since the armistice there has been an appreciable emigration of workmen temporarily unemployed on account of inevitable delays in reopening the foundries and mills. This emigration, together with the very slight increase in population during the war, has resulted in a considerable shortage of skilled labor. It is probable, however, that with the continued revival of the metallurgical and other industries most affected by the war most of these emigrants will return. In fact, the repatriation of workers in the glass industry has been going on for some time.

As stated in previous reports, it is not the damaged and destroyed plants, serious as such sabotage was, that chiefly delays the complete revival of Belgian industry. The continued scarcity of important raw materials, depreciated exchange, lack of suitable labor, the transportation crisis, and above all the continual shortage of fuel supplies are important contributing factors. All these obstacles at present combine to retard production and abnormally increase costs. They also prevent a systematic effort to offset shorter hours and higher wages for labor by more scientific shop management, reduction of overhead expenses, and an effective system of cost accounting.

Change in Labor Policy of the Russian Government.

ALEXANDER Kerenski, the leader of the first Russian revolution, has been publishing in the Berlin *Golos Rossii* a series of articles based on information contained in the *Ekonomitsheskaja Zhisn*, the official organ of the Soviet Government. References in these articles to labor conditions in Russia are quoted by *Wirtschaftsdienst*¹ and may be summarized as follows:

In all the Petrograd factories there has been a marked decline in the number of workmen employed. According to statistics which have been published, 12,141 men are employed in all the factories, but the actual number is only 7,585. During the first half of July, 1919, only 50 per cent of the hands employed at the Neva shipyard were at work, in the second half only 30 per cent, and in the first half of August only 24 per cent. Of those actually working only 33 per cent were men, the rest being women and children. The Putilov Works

¹ *Wirtschaftsdienst*. Berlin, Jan. 23, 1920.

had the names of 7,500 workers on their books, but only 2,800, or 37.3 per cent, were actually at work. The present position of the Petrograd heavy industry, which, with the Putilov, Neva, Baltic, Obuchov, and Baronoski Works, was the most important in Russia, is characteristic as showing how far the industry has been decimated by the dictatorship of the proletariat. These works used to employ between 100,000 and 150,000 hands, of which only 33 per cent are now at work. In other industries the situation is, if possible, worse; one factory after another has been forced to close, and the number of workers in the entire industrial district of Petrograd has fallen to about 7 per cent.

In Moscow, on January 1, 1919, there were 49,490 textile workers, but this number was reduced to 15,290 during the next six months. A similar reduction has taken place in the large works at Tula, Sormov, Kolomna, and in the Urals.

Two facts are apparent from the statistics: That the "nationalized" industries are almost completely ruined, and that the position of the workers under the Soviet régime has steadily deteriorated. That the Russian working classes have been decimated and demoralized by the Bolshevik economic policy is admitted by the Bolsheviks themselves, for Lenin's government has found itself obliged to do away with what was one of the main achievements of the revolution, the essential feature of "nationalization," viz, the works councils and control by the worker.

The chief cause of the terrible situation of the Russian industries is the lack of all discipline and order in the factories. The works councils and factory committees, whose function it was to establish order in the factories, have only done harm, have destroyed the last vestige of discipline, and have played havoc with the plant. All these circumstances have compelled the abolition of the works councils and the appointment at the head of the most important industrial establishments of "dictators," who have unlimited powers over the lives of the workers.

The recently appointed dictators are to endeavor to stimulate production by revising wage scale agreements and introducing a system of bonuses. The following examples of their activities are reported in the *Ekonomitsheskaja Zhisn* (Nos. 207-219):

1. The people's commissioner for the traffic system has decided to introduce a system of individual payments based on the efficiency and output of the worker.
2. The workers' central committee of the Association of Polygraphic Industries has decided to substitute a system of bonuses for the existing wage scale.
3. The Association of Metal Workers has introduced the bonus system with successful results.
4. The following system of bonuses has been introduced in the Podolian State railways: The normal standard output is taken to be 25 per cent of the general

efficiency. If a worker in a given period exceeds this standard he receives an addition of 20 per cent of the normal wage; if not, he receives only two-thirds of it. If he completes his work in half the time, i. e., is responsible for a saving of labor of 50 per cent, he receives a bonus equalling 100 per cent of the normal wage.

5. A similar bonus system has been introduced in the Kostroma Machinery Works; in some cases the manager of the works is permitted to fix the normal output and the bonuses.

6. Statistics have been published as to the results of the bonus system in the Moscow traction system. A bonus is paid if more than 12 days per month are worked. Out of 1,000 street-car conductors employed in July, 76.8 per cent worked for 12 days and 27 per cent of them received bonuses averaging 245 rubles.

7. Piecework rates have been introduced in the paper industry. Production has trebled and the bonus system is being introduced.

8. The bonus system has been introduced on the ships of the Maria River line, and the bonus is being paid in bread.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

THE following tables are based on figures which have been received by the Bureau of Labor Statistics from retail dealers through monthly reports of actual selling prices.¹

Table 1 shows for the United States retail prices of food on February 15 and March 15, 1920, and on March 15, 1919, as well as the percentage changes in the month and in the year. For example, the price of potatoes in March, 1919, was 2.9 cents; in February, 1920, 6 cents; and in March, 1920, 6.8 cents. These figures show an increase of 13 per cent in the month and an increase of 134 per cent in the year. The cost of 22 articles combined² increased 14 per cent in the year. Although there was a slight tendency for several articles to decrease during the month from February to March, the increase in other articles, such as potatoes, butter, and pork chops, offset this decrease. The change during the month in the retail cost of 22 articles combined was a decrease of less than one-tenth of 1 per cent, which for all practical purposes may be considered as no change.

¹ In addition to retail prices of food, the bureau secures prices of coal, gas, and dry goods from each of 51 cities, and publishes these prices as follows: Coal, in the March and September issues of the MONTHLY LABOR REVIEW; gas, in the June issue; dry goods, in the April, July, October, and December issues.

² The following are the 22 articles, weighted according to the consumption of the average family: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, tea. These include all articles for which prices have been secured each month since 1913 with the exception of lamb, for which the Bureau has no consumption figures

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE; MAR. 15, 1920, COMPARED WITH MAR. 15, 1919, AND FEB. 15, 1920.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (−) Mar. 15, 1920, compared with—	
		Mar. 15, 1919.	Feb. 15, 1920.	Mar. 15, 1920.	Mar. 15, 1919.	Feb. 15, 1920.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	41.8	40.6	40.8	− 2	+ 0.4
Round steak.....	do.....	39.4	37.2	37.5	− 5	+ 1
Rib roast.....	do.....	33.4	31.5	31.9	− 4	+ 1
Chuck roast.....	do.....	28.4	25.1	25.1	− 12	0
Plate beef.....	do.....	22.1	18.4	18.2	− 18	− 1
Pork chops.....	do.....	38.6	37.7	39.1	+ 1	+ 4
Bacon.....	do.....	54.9	50.3	50.2	− 9	− 0.2
Ham.....	do.....	51.4	50.7	51.2	− 0.4	+ 1
Lamb.....	do.....	38.0	39.0	39.8	+ 5	+ 2
Hens.....	do.....	41.1	44.7	45.7	+ 11	+ 2
Salmon (canned).....	do.....	32.1	37.6	37.6	+ 17	0
Milk, fresh.....	Quart.....	14.8	16.7	16.6	+ 12	− 1
Milk, evaporated (unsweetened).....	15-16 oz. can.....	15.3	16.2	15.1	− 1	− 7
Butter.....	Pound.....	66.5	72.6	75.2	+ 13	+ 4
Oleomargarine.....	do.....	39.0	43.4	43.1	+ 11	− 1
Nut margarine.....	do.....	35.5	36.1	36.1	+ 2	0
Cheese.....	do.....	40.5	43.3	42.8	+ 6	− 1
Lard.....	do.....	33.4	32.3	30.4	− 9	− 6
Crisco.....	do.....	33.2	38.1	37.5	+ 13	− 2
Eggs, strictly fresh.....	Dozen.....	48.3	68.5	55.6	+ 15	− 19
Bread.....	Pound.....	9.8	11.1	11.2	+ 14	+ 1
Flour, wheat.....	do.....	6.8	8.1	8.0	+ 18	− 1
Corn meal.....	do.....	5.9	6.5	6.5	+ 10	0
Rollod oats.....	do.....	8.3	10.1	10.3	+ 24	+ 2
Corn flakes.....	8-oz. pkg.....	14.1	14.1	14.1	0	0
Cream of Wheat.....	28-oz. pkg.....	25.1	29.3	29.7	+ 18	+ 1
Macaroni.....	Pound.....	19.3	20.0	20.2	+ 5	+ 1
Rice.....	do.....	13.4	18.3	18.4	+ 37	+ 1
Beans, navy.....	do.....	12.5	12.2	11.9	− 5	− 2
Potatoes.....	do.....	2.9	6.0	6.8	+134	+13
Onions.....	do.....	6.0	9.3	9.4	+ 57	+ 1
Cabbage.....	do.....	5.3	9.3	8.7	+ 64	− 6
Beans, baked.....	No. 2 can.....	18.1	16.9	16.8	− 7	− 1
Corn, canned.....	do.....	19.3	18.6	18.5	− 4	− 1
Peas, canned.....	do.....	19.0	19.1	19.0	0	− 1
Tomatoes, canned.....	do.....	16.4	15.2	15.1	− 8	− 1
Sugar, granulated.....	Pound.....	10.6	18.8	18.7	+ 76	− 1
Tea.....	do.....	70.4	71.4	73.2	+ 4	+ 3
Coffee.....	do.....	37.6	49.1	49.1	+ 31	0
Prunes.....	do.....	20.9	29.0	28.7	+ 37	− 1
Raisins.....	do.....	16.4	25.6	26.4	+ 61	+ 3
Bananas.....	Dozen.....	36.6	41.0	41.4	+ 13	+ 1
Oranges.....	do.....	53.2	53.4	62.0	+ 17	+16
22 weighted articles ¹					+ 14	0

¹ See note 2, p. 68.

Table 2 shows for the United States average retail prices of specified food articles on March 15 of each year, 1913 to 1920, together with the percentage change in March of each year compared with March, 1913. For example, as compared with the price in March, 1913, sugar showed a decrease of 6 per cent in 1914. As compared with March, 1913, the price in March, 1915, showed an increase of 22 per cent; in March, 1916, an increase of 37 per cent; in March, 1917, an increase of 61 per cent; in March, 1918, an increase of 70 per cent; in March, 1919, an increase of 96 per cent; and in March, 1920, an increase of 246 per cent. This means that the retail price

of sugar in March, 1920, was about $3\frac{1}{2}$ times as much as it was in March, 1913.

The cost of 22 articles, combined, increased 106 per cent during the 7-year period.

TABLE 2. AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, MAR. 15 OF EACH YEAR, 1914 TO 1920, COMPARED WITH MAR. 15, 1913.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price Mar. 15—								Per cent of increase (+) or decrease (—) Mar. 15 of each specified year compared with Mar. 15, 1913.													
		1913	1914	1915	1916	1917	1918	1919	1920	1914	1915	1916	1917	1918	1919	1920							
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.														
Sirloin steak.....	Pound.	24.6	25.4	24.6	26.2	29.5	33.8	41.8	40.8	+	3	0	+	7	+	37	+	70	+	66			
Round steak.....	do.	21.3	23.0	22.1	23.3	26.7	31.8	39.4	37.5	+	8	+	4	+	9	+	25	+	49	+	85	+	76
Rib roast.....	do.	19.3	19.9	19.5	20.6	23.3	26.8	33.4	31.9	+	3	+	1	+	7	+	21	+	39	+	73	+	65
Chuck roast.....	do.	15.6	16.9	16.0	16.5	19.3	23.2	28.4	25.1	+	8	+	3	+	6	+	24	+	49	+	82	+	61
Plate beef.....	do.	11.7	12.4	12.2	12.4	14.6	18.2	22.2	18.2	+	6	+	4	+	6	+	25	+	56	+	89	+	56
Pork chops.....	do.	20.2	20.9	17.7	21.8	27.9	33.9	39.8	39.1	+	3	—	12	+	8	+	38	+	68	+	91	+	94
Bacon.....	do.	26.1	26.7	26.4	27.6	33.3	48.8	54.9	50.2	+	2	+	1	+	6	+	28	+	87	+	110	+	92
Lam.....	do.	26.2	26.5	25.6	30.3	33.8	44.1	51.4	51.2	+	1	—	2	+	16	+	29	+	68	+	96	+	95
Lamb.....	do.	19.1	18.9	19.5	22.0	26.2	31.7	38.0	39.8	—	1	+	2	+	15	+	37	+	66	+	99	+	108
Hens.....	do.	21.5	22.4	21.2	22.9	27.6	...	41.1	45.7	+	4	—	1	+	7	+	28	...	...	+	91	+	113
Salmon (canned).....	do.	...	...	19.8	20.0	22.2	29.5	32.1	37.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Milk, fresh.....	Quart.	8.9	9.0	8.8	8.8	10.0	13.4	14.8	16.6	+	1	—	1	—	1	+	12	+	51	+	66	+	87
Milk, evaporated (unsweetened).....	15-16 oz. can.	...	...	...	...	...	...	15.3	15.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Butter.....	Pound.	41.4	35.1	35.9	40.2	46.1	55.2	66.5	75.2	—	15	—	13	—	3	+	11	+	33	+	61	+	32
Oleomargarine.....	do.	...	...	...	...	...	...	39.0	43.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nut margarine.....	do.	...	...	...	...	...	...	35.5	36.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cheese.....	do.	22.1	23.1	23.2	25.0	32.3	35.1	40.5	42.8	+	5	+	5	+	13	+	46	+	59	+	83	+	94
Lard.....	do.	15.6	15.6	15.2	18.2	23.8	33.2	33.4	30.4	0	—	3	+	17	+	53	+	113	+	114	+	95	
Crisco.....	do.	...	...	...	...	...	...	33.2	37.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Eggs, strictly fresh.....	Dozen	26.3	30.8	25.5	28.5	34.9	44.3	48.3	55.6	+	17	—	3	+	8	+	33	+	68	+	84	+	111
Bread.....	Pound	5.6	6.2	7.1	7.2	8.1	9.5	9.8	11.2	+	11	+	27	+	29	+	45	+	70	+	75	+	100
Flour.....	do.	3.3	3.3	4.4	3.9	5.7	6.6	6.8	8.0	0	+	33	+	18	+	73	+	100	+	106	+	142	
Corn meal.....	do.	3.0	3.1	3.3	3.2	4.1	7.2	5.9	6.5	+	3	+	10	+	7	+	37	+	140	+	97	+	117
Rolled oats.....	do.	...	...	...	...	...	...	8.3	10.3	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cornflakes.....	8-oz. pkg.	...	...	...	...	...	...	14.1	14.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cream of Wheat.....	28-oz. pkg.	...	...	...	...	...	...	25.1	29.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Macaroni.....	Pound	...	...	...	...	...	...	19.3	20.2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rice.....	do.	8.6	8.7	9.1	9.1	9.1	12.0	13.4	18.4	+	1	+	6	+	6	+	6	+	40	+	56	+	114
Beans, navy.....	do.	...	...	...	...	...	...	15.4	18.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Potatoes.....	do.	1.5	1.9	1.4	2.4	5.2	2.5	2.9	6.8	+	27	—	7	+	60	+	247	+	67	+	93	+	353
Onions.....	do.	...	...	3.3	4.5	12.5	4.0	6.0	9.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cabbage.....	do.	...	...	...	...	...	...	5.3	8.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Beans, baked.....	No. 2 can.	...	...	...	...	...	...	18.1	16.8	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Corn, canned.....	do.	...	...	...	...	...	...	19.3	18.5	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Peas, canned.....	do.	...	...	...	...	...	...	19.0	19.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tomatoes, canned.....	do.	...	...	...	...	...	...	16.4	15.1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sugar, granulated.....	Pound	5.4	5.1	6.6	7.4	8.7	9.2	10.6	18.7	—	6	+	22	+	37	+	61	+	70	+	96	+	246
Tea.....	do.	54.3	54.5	54.6	54.6	54.6	61.5	70.4	73.2	+	0.4	+	1	+	1	+	13	+	30	+	35	...	...
Coffee.....	do.	29.8	29.7	29.9	29.9	29.9	30.4	37.6	49.1	—	0.3	+	0.3	+	0.3	+	0.3	+	2	+	26	+	65
Prunes.....	do.	...	...	13.7	13.3	14.1	16.5	20.9	28.7	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Raisins.....	do.	...	...	12.5	12.6	14.1	15.1	16.4	26.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bananas.....	Dozen	...	...	...	...	...	...	36.6	41.4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Oranges.....	do.	...	...	...	...	...	...	53.2	62.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...
22 weighted articles. ¹		...	...	...	...	...	...	...	...	+	2	+	1	+	10	+	36	+	58	+	80	+	106

¹ See note 2, p. 68.

Relative Retail Prices of 22 Articles of Food.

IN TABLE 3, the average monthly and yearly prices of 22 food articles³ are shown as relative prices or percentages of the average prices for the year 1913. These relatives are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. Relative prices must be used with caution. For example, the relative price of pork chops in November, 1919, was 200, which means that the money price was 200 per cent of the money price in 1913, or, in other words, the price doubled. The relative price of pork chops in December was 181, showing a drop of 19 points from 200, which is a decrease of only 9.5 per cent.

In the last column of this table are given index numbers⁴ showing the changes by months and years in the retail cost of the 22 food articles weighted according to the importance of each article in the consumption of the average family. Prices are obtained each month for 43 food articles, but only 22 of these are included in the retail food price index because the amounts consumed by the average family have been obtained as yet for only these 22 food articles. These articles comprise about two-thirds of the entire food budget of the average family and reflect with great accuracy changes in the cost of the food budget. The figure representing the cost of these 22 food articles was 200 in February and March, 1920. This shows that as compared with 1913 the cost of these food articles was in March, 1920, double what it was in 1913, and that during the month from February to March there was no change in the cost of these articles.

The curve shown in the chart on page 74 pictures more readily to the eye the changes in the cost of the family market basket and the trend in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale⁵ because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

³ For list of articles, see note 2, p. 68.

⁴ For a discussion of the method used in the computation of these index figures, see MONTHLY LABOR REVIEW for March, 1920, p. 34.

⁵ For a discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts" by Lucian W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, "The 'ratio' chart," by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pp.

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907 TO MARCH, 1920.

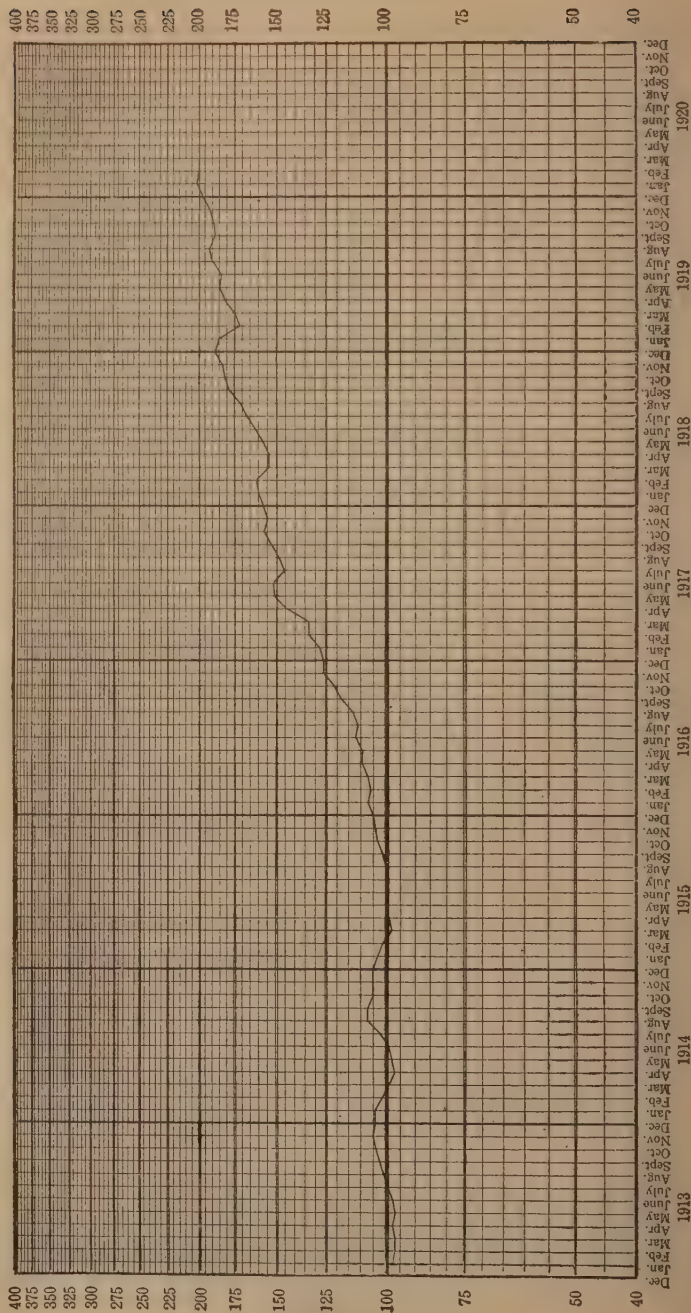
Year and month.	Sirloin steak.	Rib roast.	Chuck roast.	Plate beef, chops.	Ba- con.	Lard.	Hens.	Eggs.	But- ter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Pota- toes.	Sugar.	Coffee.	Tea.	22 weight- ed arti- cles.
1907.....	71	68	76	74	74	76	81	84	85	87	87	87	85	88	88	105	105	.....	.....	82
1908.....	73	71	78	76	77	78	83	86	86	90	90	90	86	92	92	111	108	.....	.....	84
1909.....	77	74	81	83	83	82	90	89	90	92	92	92	90	102	102	112	107	.....	.....	89
1910.....	80	78	85	92	95	91	104	93	94	95	95	95	94	95	95	101	109	.....	.....	93
1911.....	81	79	85	85	91	89	98	91	88	96	96	96	94	102	102	130	111	.....	.....	92
1912.....	91	89	94	91	91	91	94	93	93	97	97	97	93	115	115	132	115	.....	.....	98
1913: Av. for year..	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
January.....	94	92	95	93	94	93	97	95	108	107	100	100	100	99	99	91	106	100	100	98
February.....	94	93	95	93	95	94	98	97	91	100	100	100	100	98	98	90	100	100	100	97
March.....	97	96	98	98	97	97	99	100	77	100	100	100	100	98	98	88	99	100	100	97
April.....	101	99	101	101	100	99	100	104	73	106	100	100	100	98	98	87	98	100	100	98
May.....	101	100	101	101	100	99	100	104	76	94	99	99	101	98	99	91	97	100	100	97
June.....	102	101	102	101	102	100	103	81	92	91	99	99	100	98	99	104	97	100	100	98
July.....	104	104	102	103	104	104	101	102	87	91	99	99	101	98	100	110	100	100	100	98
August.....	104	104	102	103	104	105	106	102	92	92	99	99	101	98	100	100	100	100	100	100
September.....	103	104	101	103	102	104	102	101	103	98	100	100	100	102	100	109	102	100	100	101
October.....	101	103	101	102	103	102	101	100	100	101	101	100	99	103	100	106	101	100	100	104
November.....	100	102	100	102	101	100	101	97	144	101	102	100	99	104	100	107	99	100	100	105
December.....	99	101	100	97	99	99	100	98	135	104	102	102	100	99	100	106	98	100	100	104
1914: Av. for year..	102	105	103	104	102	102	99	102	94	104	100	112	104	105	101	108	108	100	100	102
January.....	99	102	100	102	99	98	100	126	104	104	102	110	98	104	100	108	95	99	100	104
February.....	99	102	101	103	102	100	99	104	93	104	102	110	98	103	100	108	94	99	100	101
March.....	100	103	101	102	100	99	99	105	92	105	101	110	99	103	100	107	93	100	100	99
April.....	100	103	102	103	99	99	108	74	86	104	100	110	99	103	100	105	91	100	100	97
May.....	102	105	102	103	106	99	98	106	77	85	103	110	99	103	100	112	91	100	101	98
June.....	103	106	103	103	103	100	97	103	82	88	100	110	99	103	100	132	93	100	101	99
July.....	106	106	105	106	106	101	103	97	87	89	103	110	98	105	101	155	95	99	101	102
August.....	110	113	108	109	107	108	99	104	95	94	103	112	98	105	101	111	143	100	101	107
September.....	107	110	105	108	107	108	98	103	107	98	104	114	111	109	101	105	145	100	101	107
October.....	103	107	104	106	106	105	98	100	113	98	104	114	111	109	101	89	132	99	101	105
November.....	101	103	103	103	103	102	99	97	131	103	104	114	112	109	101	83	113	99	101	105
December.....	101	103	101	103	103	100	97	94	139	104	101	116	113	107	101	84	110	99	101	105
1915: Av. for year..	101	103	101	100	96	100	97	99	93	105	99	124	108	108	104	89	120	101	100	101
January.....	100	102	101	101	95	97	95	97	129	101	105	120	109	104	104	85	110	100	100	103
February.....	98	100	100	101	95	98	97	98	98	106	100	126	138	110	104	84	118	101	100	101
March.....	97	99	99	98	99	94	95	99	74	94	106	126	136	110	104	82	120	100	100	98
April.....	99	100	100	99	98	94	93	100	75	94	105	126	137	109	104	86	122	101	100	99
May.....	101	103	101	101	99	98	95	96	91	106	98	128	139	104	104	89	124	101	100	100
June.....	103	105	103	101	99	97	95	98	90	106	98	128	130	109	104	99	126	101	100	100
July.....	105	107	104	103	100	98	97	81	90	103	98	126	125	108	104	85	127	101	100	100
August.....	104	106	103	101	100	97	88	97	88	103	99	126	124	108	104	82	123	101	100	101
September.....	104	106	102	101	107	100	97	88	97	101	98	124	117	108	104	79	118	100	100	101
October.....	103	104	102	101	101	99	91	97	101	98	103	124	113	108	104	94	111	100	100	103
November.....	101	102	101	99	101	100	92	95	105	105	100	122	113	107	104	97	119	100	100	104
December.....	99	101	100	98	101	100	92	95	105	105	100	122	114	107	104	106	124	100	100	105
1916: Av. for year..	103	110	107	103	103	109	111	109	161	107	102	130	136	113	105	155	146	160	100	114
January.....	101	102	101	99	99	101	93	101	123	100	110	122	120	107	105	136	123	100	100	107
February.....	101	102	102	100	101	102	94	104	99	112	100	124	125	108	104	141	125	100	100	105

104	104	104	103	102	104	103	104	96	107	82	105	113	106	124	120	107	104	140	137	100	107
March.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
April.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
May.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
June.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
July.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
August.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
September.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
October.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
November.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
December.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
1917: Av. for year.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
January.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
February.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
March.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
April.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
May.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
June.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
July.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
August.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
September.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
October.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
November.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
December.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
1918: Av. for year.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
January.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
February.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
March.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
April.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
May.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
June.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
July.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
August.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
September.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
October.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
November.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
December.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
1919: Av. for year.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
January.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
February.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
March.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
April.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
May.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
June.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
July.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
August.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
September.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
October.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
November.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
December.....	106	106	107	103	107	104	107	100	111	79	108	113	99	124	119	108	104	138	145	100	107
1920:	154	161	153	152	143	181	186	221	184	261	204	196	188	182	233	220	203	253	264	164	197
January.....	159	166	158	152	178	186	187	215	197	240	194	196	187	105	245	220	208	218	324	165	201
February.....	160	167	159	157	152	180	188	204	210	260	190	196	188	108	245	217	211	353	342	165	181
March.....	161	168	161	157	130	186	190	192	215	151	196	194	187	200	242	217	211	340	340	165	200

No hens sold in this month by order of Food Administration.

TREND IN RETAIL COST OF 22 FOOD ARTICLES, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO MARCH, 1920.

{Average cost for 1913=100.}



Comparison of Retail Food Costs in 51 Cities.

TABLE 4 shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles⁶ in March, 1920, compared with the average cost in the year 1913, in March, 1919, and in February, 1920. For 11 other cities comparisons are given for the one-year and one-month periods. These cities have been scheduled by the Bureau at different dates since 1913. For Savannah, Ga., the comparison is given only for the month, as this city was first scheduled by the Bureau in 1920. These percentage changes are based on actual retail prices secured each month from retail dealers, and on the average family consumption of these articles in each city.⁷

TABLE 4.—PERCENTAGE CHANGES IN THE RETAIL COST OF 22 FOOD ARTICLES IN MARCH, 1920, COMPARED WITH THE COST IN FEBRUARY, 1920, MARCH, 1919, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

City.	Per cent of increase, March, 1920, compared with—		Per cent of increase (+) or decrease (−) March, 1920, compared with February, 1920.	City.	Per cent of increase, March, 1920, compared with—		Per cent of increase (+) or decrease (−) March, 1920, compared with February, 1920.
	1913	March, 1919.			1913	March, 1919.	
Atlanta.....	100	13	+1	Minneapolis.....	108	17	+0.3
Baltimore.....	101	8	−1	Mobile.....	11	11	−1
Birmingham.....	102	10	−0.3	Newark.....	89	10	−2
Boston.....	95	14	−0.2	New Haven.....	98	14	+0.3
Bridgeport.....		13	−1	New Orleans.....	97	11	−0.3
Buffalo.....	104	13	−1	New York.....	99	12	−2
Butte.....		13	+2	Norfolk.....		8	−3
Charleston.....	109	13	+1	Omaha.....	107	17	+2
Chicago.....	107	20	+3	Peoria.....		15	+1
Cincinnati.....	99	14	+2	Philadelphia.....	96	11	−1
Cleveland.....	105	17	+2	Pittsburgh.....	98	13	+0.1
Columbus.....		14	+1	Portland, Me.....		11	−0.2
Dallas.....	97	11	+1	Portland, Oreg.....	87	11	+2
Denver.....	95	10	+3	Providence.....	104	15	−1
Detroit.....	111	19	+1	Richmond.....	108	12	−2
Fall River.....	101	16	+0.4	Rochester.....		15	−2
Houston.....		13	+1	St. Louis.....	111	16	+1
Indianapolis.....	97	15	+0.4	St. Paul.....		17	+0.1
Jacksonville.....	89	12	−1	Salt Lake City.....	83	10	+2
Kansas City, Mo.....	105	17	+3	San Francisco.....	87	13	−0.4
Little Rock.....	92	11	+0.1	Savannah.....			−3
Los Angeles.....	80	14	+0.1	Scranton.....	102	16	−1
Louisville.....	90	7	−1	Seattle.....	90	11	−1
Manchester.....	98	14	−1	Springfield, Ill.....		20	+2
Memphis.....	103	12	+0.2	Washington, D.C.....	102	9	−3
Milwaukee.....	107	16	+0.1				

⁶ For list of articles see note 2, p. 68.

⁷ The consumption figure used for each article in each city is given in the MONTHLY LABOR REVIEW of November, 1918, pp. 94 and 95.

Index Numbers of Wholesale Prices in the United States.

WHOLESALE prices of commodities as a rule were higher in March than in the previous month, according to information gathered by the Bureau of Labor Statistics of the United States Department of Labor. The Bureau's weighted index number, which is built on a larger number of articles than any other currently published series, increased to 253 for March as compared with 249 for February.

Lumber and building materials again showed large increases, the index number for this group rising from 300 to 324, or 8 per cent. Chemicals and drugs increased 4 per cent and fuel and lighting 2½ per cent in price from February to March. Smaller increases were recorded for metals and metal products and for farm products and foods. Cloths and clothing and house-furnishing goods showed no change in average prices.

The more important price changes from February to March are shown in the following statement:

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN MARCH
AS COMPARED WITH FEBRUARY, 1920, BY GROUPS OF COMMODITIES.

Increases.

Commodity.	Per cent.	Commodity.	Per cent.	Commodity.	Per cent.
<i>Farm products.</i>		<i>Food, etc.—Concluded.</i>		<i>Lumber and building materials.</i>	
Cotton:		Poultry, Chicago.....	2.63	Plate glass.....	2.70
New Orleans.....	2.94	Olive oil.....	6.03	Lime.....	2.00
New York.....	6.76	Salt.....	4.29	Maple lumber.....	8.00
Barley.....	9.21	Sugar, 96°.....	4.13	Plain oak.....	23.66
Corn.....	8.86	Potatoes.....	22.91	Quartered oak.....	5.00
Oats.....	8.15			Yellow-pine siding.....	52.39
Rye.....	11.20	<i>Cloths and clothing.</i>		Carbonate of lead.....	2.45
Wheat, average.....	1.75	Linen shoe thread.....	15.2	Linseed oil.....	1.85
Hogs.....	2.50	Dress goods: Poplar cloth.....	15.8	Turpentine.....	12.72
Poultry, Chicago.....	14.52			<i>Chemicals and drugs.</i>	
<i>Food, etc.</i>		<i>Fuel and lighting.</i>		Sulphuric acid.....	7.28
Butter:		Denatured alcohol.....	18.06	Wood alcohol.....	19.00
Boston.....	3.34	Gasoline.....	5.66	Carbonate of soda.....	9.29
Chicago.....	6.61	Crude petroleum.....	13.11	Caustic soda.....	29.69
Cincinnati.....	5.22	Refined petroleum.....	3.80	Nitrate of soda.....	4.05
New Orleans.....	7.22	<i>Metals and metal products.</i>		Soda ash.....	25.24
New York.....	2.17	Bar iron:		<i>Miscellaneous.</i>	
Philadelphia.....	2.00	Philadelphia.....	7.6	Brass.....	9.4
St. Louis.....	3.54	Pittsburgh.....	12.5	Lubricating oil, paraffin.....	1.2
Cheese: San Francisco.....	4.55	} 10.0		Paper, wrapping.....	2.9
Coffee.....	1.50			Rope, pure manila.....	4.1
Flour, rye.....	11.72	Lead, pig, desilverized.....	4.8	Wood pulp, sulphite.....	5.5
Flour, wheat:		Lead pipe.....	2.6	Mill feed, middlings.....	9.3
Kansas City.....	3.10	Pig iron: Bessemer.....	1.2	Tankage.....	11.8
St. Louis.....	1.50	Pipe, cast iron.....	1.7	Soy bean oil.....	2.4
Oranges.....	12.48	Steel billets, Bessemer.....	8.6		
Mead.....	10.86	Steel plates, tank.....	4.3		
Fresh beef, New York.....	1.90	Steel, structural.....	15.8		
Lams.....	3.24	Tin, pig.....	2.9		

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN MARCH
AS COMPARED WITH FEBRUARY, 1920, BY GROUPS OF COMMODITIES—Concluded.

Decreases.

Commodity.	Per cent.	Commodity.	Per cent.	Commodity.	Per cent.
<i>Farm products.</i>		<i>Food, etc.—Concluded.</i>		<i>Cloths and clothing—Conclcd.</i>	
Alfalfa hay.....	2.36	Wheat flour:		Yarns, 2/32s, crossbred stock.....	2.2
Calfskins.....	13.50	Minneapolis.....	2.60	<i>Metals and metal products.</i>	
Goatskins.....	4.84	Toledo.....	1.60	Copper, ingot, electrolytic.....	2.5
Packers' hides.....	9.17	Currants.....	10.60	Nails, wire.....	10.9
Cattle.....	4.40	Lemons.....	15.10	Pig iron, basic.....	1.5
Sheep.....	3.80	Prunes.....	6.37	Silver, bar, fine.....	3.8
Peanuts.....	5.13	Raisins.....	2.60	Zinc, spelter.....	3.0
Tobacco.....	2.63	Bacon.....	4.30	<i>Chemicals and drugs.</i>	
<i>Food, etc.</i>		Fresh beef, Chicago.....	3.53	Glycerin.....	4.09
Beans.....	3.75	Lamb.....	4.58	Opium.....	6.18
Butter: San Francisco.....	3.88	Mutton.....	5.00	<i>Miscellaneous.</i>	
Cheese: New York.....	3.20	Mess pork.....	2.62	Cottonseed meal, prime... yellow.....	3.9
Eggs:		Milk:		Cottonseed oil, summer, yellow.....	1.9
Boston.....	20.75	Chicago.....	12.35	Jute, raw.....	4.3
Chicago.....	12.75	New York.....	2.85	Rubber.....	4.7
Cincinnati.....	18.44	Oleomargarine.....	2.62	Hemp.....	3.3
New York.....	14.65	Oleo oil.....	6.74		
Philadelphia.....	23.25	Rice.....	2.00		
San Francisco.....	13.80	Granulated sugar.....	8.23		
Herring.....	10.90	<i>Cloths and clothing.</i>			
Mackerel.....	10.50	Print cloths.....	.8		
		Silk, raw.....	6.5		

Measured by changes in the index numbers for the 12 months from March, 1919, to March, 1920, farm products increased nearly 5 per cent in price, food 21 per cent, and cloths and clothing over 64 per cent. In the same period fuel and lighting increased 14 per cent, metals and metal products 18½ per cent, and lumber and building materials 96 per cent in price. The increase in chemicals and drugs was 12 per cent, in house-furnishing goods, 51 per cent, and in the group of miscellaneous commodities, including such important articles as cottonseed oil and meal, mill feed, coconut and soy bean oil, lubricating oil, jute, rubber, newsprint and wrapping paper, Manila hemp, and wood pulp, the increase was about 6 per cent. The increase in all commodities combined was nearly 26 per cent.

INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED YEARS AND MONTHS, 1913 TO MARCH, 1920, BY GROUPS OF COMMODITIES.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House-furnishing goods.	Miscellaneous.	All commodities.
1913.....	100	100	100	100	100	100	100	100	100	100
January.....	97	99	100	103	107	100	101	100	100	100
April.....	97	96	100	98	102	101	101	100	99	98
July.....	101	102	100	99	98	101	99	100	101	100
October.....	103	102	100	100	99	98	100	100	100	101
1914.....	103	103	98	96	87	97	101	99	99	100
January.....	101	102	98	99	92	98	100	99	99	100
April.....	103	95	99	98	91	99	100	99	101	98
July.....	104	104	99	95	85	97	99	99	97	100
October.....	103	107	97	93	83	96	105	99	96	99
1915.....	105	104	100	93	97	94	114	99	99	101
January.....	102	106	96	93	83	94	103	99	100	99
April.....	107	105	99	89	91	94	102	99	99	100
July.....	108	104	99	90	102	93	108	99	98	101
October.....	105	103	103	96	100	93	124	99	99	101
1916.....	122	126	123	119	148	101	159	115	120	124
January.....	108	113	110	105	126	99	150	105	107	110
April.....	114	117	119	108	147	101	172	108	110	117
July.....	118	121	126	108	145	99	156	121	120	119
October.....	136	140	138	133	151	101	150	124	132	134
1917.....	189	176	181	175	208	124	198	144	155	176
January.....	148	150	161	176	183	106	159	132	138	151
April.....	181	182	169	184	208	114	170	139	149	172
July.....	199	181	187	192	257	132	198	152	153	186
October.....	208	183	193	146	182	134	252	152	163	181
1918.....	220	189	239	163	181	151	221	196	193	196
January.....	207	187	211	157	174	136	232	161	178	185
February.....	208	186	216	157	176	138	232	161	181	186
March.....	212	177	223	158	176	144	232	165	184	187
April.....	217	178	232	157	177	146	229	172	191	190
May.....	214	177	237	160	178	148	223	173	194	190
June.....	217	179	245	159	178	150	219	198	198	193
July.....	224	184	249	166	184	154	216	199	190	198
August.....	230	191	252	166	185	157	222	221	191	202
September.....	237	199	255	167	184	159	220	226	194	207
October.....	224	201	257	167	187	158	218	226	196	204
November.....	221	206	256	171	188	164	215	226	203	206
December.....	222	210	250	171	184	164	195	227	204	206
1919.....	234	210	261	173	161	192	179	236	217	212
January.....	222	207	234	170	172	161	191	218	212	203
February.....	218	196	223	169	168	163	185	218	208	197
March.....	228	203	216	168	162	165	183	218	217	201
April.....	235	211	217	167	152	162	178	217	216	203
May.....	240	214	228	167	152	164	179	217	213	207
June.....	231	204	258	170	154	175	174	233	212	207
July.....	246	216	282	171	158	186	171	245	221	218
August.....	243	227	304	175	165	208	172	259	225	226
September.....	226	211	306	181	160	227	173	262	217	220
October.....	230	211	313	181	161	231	174	264	220	223
November.....	240	219	325	179	164	236	176	299	220	230
December.....	244	234	335	181	169	253	179	303	220	238
1920:										
January.....	246	253	350	184	177	268	189	324	227	248
February.....	237	244	356	187	189	300	197	329	227	249
March ¹	239	246	356	192	192	324	205	329	230	253

¹ Preliminary.

Changes in Wholesale Prices in the United States.

INFORMATION collected in representative markets by the Bureau of Labor Statistics shows that further increases took place in the wholesale prices of many important commodities in the United States during the first quarter of 1920. Among the articles showing an increase are sheep, mutton, hams, butter, corn and corn meal, oats, potatoes, cotton and cotton goods, shoes, pig iron, steel billets, pig lead, crude and refined petroleum, and gasoline.

On the other hand, some articles, as cattle, fresh and salt beef, hogs, bacon, lard, salt pork, eggs, milk, wheat and wheat flour, rice, sugar, hides, and electrolytic copper decreased in price during the quarter. Rye and rye flour, barley, wool and woolen goods, leather, anthracite and bituminous coal, coke, copper wire, tin plate and pig tin, and spelter showed practically no change in price.

Comparing prices in March with those of a year ago, the Bureau's records show that No. 1 northern spring wheat increased 18 per cent, wheat flour 17 per cent, rice 37 per cent, oats 44 per cent, barley 55 per cent, granulated sugar 56 per cent, and potatoes nearly 229 per cent. Butter, milk, eggs, corn and corn meal, rye, and rye flour showed increases ranging from 4 to 16 per cent. In the same period cotton increased 52 per cent, cotton yarns 89 per cent, bleached muslin 79 per cent, worsted yarns 47 per cent, suitings 72 per cent, storm serge 35 per cent, packers' hides 32 per cent, and chrome calf leather 88 per cent. Men's shoes showed an increase of 48 per cent, women's shoes 57 per cent, coke 34 per cent, copper wire 32 per cent, pig iron 33 per cent, steel billets 42 per cent, pig lead 77 per cent, and crude petroleum 53 per cent. Increases of 12 per cent, 14 per cent, 23 per cent, 37 per cent, and 38 per cent were shown for sole oak leather, gasoline, electrolytic copper, spelter, and refined petroleum, respectively, while wool, and anthracite and bituminous coal increased less than 10 per cent.

On the other hand, mess beef decreased 52 per cent, bacon 31 per cent, lard 25 per cent, hogs 24 per cent, cattle 22 per cent, and fresh beef and mess pork each decreased 16 per cent from March, 1919, to March, 1920. Hams, mutton, tin plate, and pig tin showed decreases ranging from 4 to 14 per cent.

WHOLESALE PRICES IN CERTAIN MONTHS, 1914 TO 1920, AS COMPARED WITH AVERAGE PRICES IN 1913.

Average money prices.

Article.	Unit.	1913				July--				1918				1919				1920		
		1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.				
FOODSTUFFS.																				
(a) Animal.																				
Cattle, good to choice steers....	100 lbs..	\$8.507	\$9.219	\$9.213	\$9.985	\$12.560	\$13.113	\$15.175	\$17.625	\$17.856	\$18.413	\$18.325	\$16.869	\$17.594	\$15.938	\$14.969	\$14.400			
Beef, fresh, good native steers....	Lb.....	18.920	17.250	17.500	18.250	30.500	31.500	31.900	34.875	35.500	35.500	35.500	34.300	23.250	18.025	17.000	17.000			
Hogs, heavy.....	100 lbs..	8.365	8.760	7.281	9.825	15.460	16.300	17.150	17.720	17.850	17.538	20.500	22.225	14.656	15.044	14.435	14.435			
Bacon, short, clear sides.....	Lb.....	1.127	1.141	1.111	1.157	1.248	1.293	1.271	1.276	1.286	1.289	1.325	1.357	1.227	1.221	1.220	1.211			
Hams, smoked, loose.....	Lb.....	1.166	1.177	1.161	1.190	1.240	1.295	1.308	1.363	1.366	1.349	1.360	1.384	1.297	1.294	1.306	1.316			
Lard, prime, contract.....	Lb.....	1.102	1.102	1.081	1.131	1.201	1.250	1.258	1.264	1.266	1.238	1.313	1.351	1.280	1.241	1.210	1.210			
Pork, salt, mess.....	Bbl.....	22.471	23.625	18.500	27.167	42.250	50.400	53.200	48.500	42.500	50.375	55.000	58.900	44.125	44.875	43.438	42.300			
Sheep, ewes.....	100 lbs..	4.687	4.538	5.469	6.545	8.600	11.144	14.950	10.975	9.469	9.556	13.500	8.125	7.156	10.875	13.063	13.525			
Mutton, dressed.....	Lb.....	1.103	1.095	1.109	1.131	1.145	1.192	1.243	1.205	1.151	1.176	1.229	1.159	1.126	1.158	1.206	1.195			
Butter, creamery, extra.....	Lb.....	3.10	2.70	2.61	2.76	3.76	4.87	4.15	4.32	5.54	6.18	6.15	5.12	6.46	6.31	6.22	6.63			
Eggs, fresh, firsts.....	Doz.....	2.26	1.87	1.69	2.23	3.18	5.57	3.30	3.74	4.97	5.79	4.03	4.06	5.69	6.52	5.15	4.50			
Milk.....	Qt.....	.035	.030	.030	.031	.050	.081	.059	.054	.082	.091	.066	.071	.073	.085	.081	.079			
(b) Vegetable.																				
Wheat, No. 1, northern.....	Bu.....	.874	.897	1.390	1.170	2.582	2.170	2.170	2.170	2.216	2.223	2.589	2.680	2.625	2.931	2.688	2.755			
Wheat flour, standard patent.....	Bbl.....	4.584	4.594	7.031	6.100	12.750	10.085	9.985	10.702	10.210	12.275	12.215	12.155	12.031	14.444	13.538	13.165			
Corn, No. 2, mixed.....	Bu.....	.625	.710	.783	.808	2.044	1.775	1.665	1.665	1.585	1.401	1.609	1.920	1.400	1.503	1.450	1.579			
Corn meal.....	100 lbs..	1.599	1.780	1.750	1.982	4.890	4.835	5.350	4.825	3.370	3.150	3.525	4.488	2.950	3.080	3.013	3.450			
Oats, standard, in store.....	Bu.....	.376	.369	.405	.764	.799	.872	.765	.663	.653	.681	.764	.706	.836	.833	.901	.901			
Rye, No. 2.....	Bu.....	.636	.618	1.036	.966	2.226	1.915	2.648	1.705	1.625	1.613	1.741	1.555	1.388	1.766	1.568	1.744			
Rye flour.....	Bbl.....	3.468	3.075	5.535	5.035	11.417	10.356	13.687	10.500	9.169	8.738	10.060	8.050	7.413	9.538	8.513	9.510			
Barley, fair to good malting.....	Bu.....	.625	.533	.743	.746	1.391	1.534	1.722	1.125	.957	.956	1.133	1.268	1.269	1.494	1.390	1.518			
Rice, Honduras, head.....	Bu.....	.051	.054	.049	.045	.070	.079	.087	.094	.091	.091	.087	.133	1.121	1.27	1.28	1.28			
Potatoes, white.....	Bu.....	.614	1.206	.444	.863	2.375	1.272	.687	1.035	.993	1.084	1.152	1.683	1.350	2.621	2.678	3.291			
Sugar, granulated.....	Lb.....	.043	.042	.058	.075	.075	.074	.073	.074	.088	.088	.088	.088	.088	1.54	.150	.137			
TEXTILES AND LEATHER GOODS.																				
Cotton, upland, middling.....	Lb.....	.128	.131	.092	.130	.261	.324	.317	.312	.325	.296	.290	.351	.355	.393	.388	.414			
Cotton yarn, carded, 10/1.....	Lb.....	.221	.215	.160	.253	.450	.536	.616	.641	.610	.445	.417	.591	.611	.727	.747	.755			
Sheeting, brown, Pepperell.....	Yd.....	.073	.070	.060	.078	.140	.171	.240	(*)	(*)	.191	.150	.219	.229	.285	(*)	(*)			
Bleached muslin, Lonsdale.....	Yd.....	.082	.085	.075	.083	.160	.180	.230	.250	.250	.209	.176	.274	.294	.323	.333	.333			

Wool, 1/4 and 3/8 grades, scoured	Lb.	.471	.444	.557	.658	1.200	1.455	1.455	1.437	1.200	1.001	1.236	1.236	1.236	1.236	1.236	1.236	1.236	1.236
Wool, worsted yarn, 2/32's	Lb.	.777	.650	.850	1.100	1.600	2.000	2.000	2.150	1.750	1.500	1.600	1.750	1.750	1.750	1.750	1.750	1.750	1.750
Wool, worsted suitings, 16-oz.	Yd.	1.382	1.328	1.500	2.000	3.250	4.065	4.275	4.450	3.450	3.000	3.200	3.450	3.450	3.450	3.450	3.450	3.450	3.450
Wool, Storm serge, all-wool, 50-in.	Yd.	.563	.505	.539	.760	1.176	1.308	1.308	1.470	1.042	1.054	1.223	1.374	1.421	1.421	1.421	1.421	1.421	1.421
Hides, packers' heavy native steers.	Lb.	.184	.194	.258	.270	.330	.328	.272	.324	.300	.280	.485	.482	.400	.400	.400	.400	.400	.400
Leather, chrome calf	Sq. ft.	.270	.275	.280	.460	.540	.530	.550	.640	.670	.660	1.100	1.250	1.275	1.275	1.275	1.275	1.275	1.275
Leather, sole, oak	Lb.	.449	.475	.495	.635	.815	.830	.800	.830	.770	.785	.825	.950	.915	.915	.915	.915	.915	.915
Shoes, men's, Goodyear welt, vulc calf, blucher.	Pair.	3.113	3.150	3.250	3.750	4.750	4.750	5.000	5.645	6.500	6.500	7.476	9.000	9.282	9.500	9.500	9.500	9.500	9.500
Shoes, women's, Goodyear welt, kid, 8-in. lace.	Pair.	2.175	2.260	2.350	2.750	3.500	4.250	4.250	5.000	5.350	5.350	7.250	8.000	8.000	8.000	8.250	8.250	8.250	8.250
MINERAL AND METAL PRODUCTS.																			
Coal, anthracite, chestnut	2,240 lbs.	5.313	5.241	5.200	5.507	5.933	6.600	6.370	6.693	7.000	8.050	8.304	8.507	8.518	8.518	8.518	8.518	8.518	8.518
Coal, bituminous, run of mine	2,000 lbs.	2.200	2.200	2.200	2.200	5.000	3.600	3.600	4.100	4.100	4.100	4.000	4.500	4.100	4.100	4.100	4.100	4.100	4.100
Coal, lump, prompt shipment	2,000 lbs.	2.538	2.538	2.750	2.750	15.000	6.000	6.000	6.000	6.000	5.781	4.095	4.825	6.000	6.000	6.000	6.000	6.000	6.000
Copper, electrolytic	Lb.	.157	.134	.199	.265	.318	.235	.235	.255	.260	.204	.153	.215	.193	.191	.186	.186	.186	.186
Copper wire, bare, No. 8.	Lb.	.167	.148	.210	.325	.328	.262	.263	.285	.290	.228	.244	.264	.228	.230	.230	.230	.230	.230
Pig iron: Bessemer.	2,240 lbs.	17.133	14.900	14.950	37.250	57.450	37.250	36.150	36.600	36.600	33.600	39.350	29.350	40.400	42.900	43.400	43.400	43.400	43.400
Steel billets.	2,240 lbs.	25.789	19.000	21.380	41.000	47.500	47.500	47.500	47.500	47.500	43.500	38.500	38.500	48.000	55.250	60.000	60.000	60.000	60.000
Iron plate, domestic, coke	100 lbs.	3.558	3.350	3.175	5.875	12.000	7.750	7.750	7.750	7.750	7.350	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000
Pig tin.	Lb.	.449	.311	.391	.589	.620	.842	.880	.932	.796	.715	.725	.560	.627	.603	.621	.621	.621	.621
Pig lead.	Lb.	.044	.039	.058	.080	.114	.068	.070	.080	.081	.056	.051	.064	.087	.088	.092	.092	.092	.092
Spelter.	Lb.	.058	.051	.020	.113	.093	.079	.070	.087	.091	.074	.065	.079	.097	.099	.092	.092	.092	.092
Petroleum, crude.	Gal.	2.450	1.750	1.350	2.600	3.100	3.750	4.000	4.000	4.000	4.000	4.000	4.250	5.063	5.513	6.000	6.100	6.100	6.100
Petroleum, refined, water-white	Gal.	.123	.120	.120	.120	.120	.160	.160	.171	.175	.175	.185	.205	.224	.224	.240	.250	.250	.250
Gasoline, motor.	Gal.	.168	.140	.120	.240	.240	.240	.240	.241	.245	.245	.245	.245	.257	.265	.280	.280	.280	.280

This table is published quarterly in the February, May, August, and November issues of the MONTHLY LABOR REVIEW.

Standard war flour.

No quotation.

* Prior to January, 1918, prices are for gun metal, button.

WHOLESALE PRICES IN CERTAIN MONTHS, 1914 TO 1920, AS COMPARED WITH AVERAGE PRICES IN 1913—Concluded.

Relative prices.

Article.	July—					1918				1919				1920		
	1913	1914	1915	1916	1917	Jan.	Apr.	July.	Oct.	Jan.	Apr.	July.	Oct.	Jan.	Feb.	Mar.
FOODSTUFFS.																
<i>(a) Animal.</i>																
Cattle, good to choice steers.....	100	108.4	108.3	117.4	147.6	154.1	178.4	207.2	209.9	216.4	215.4	198.3	206.8	137.4	176.0	169.3
Beef, fresh, good native steers.....	100	103.8	101.5	108.5	126.2	134.6	157.7	184.6	188.5	185.6	188.5	160.0	176.2	137.4	163.8	157.7
Peef, salt, extra mess.....	100	91.2	92.5	96.4	161.2	166.5	168.6	184.3	187.6	187.6	187.6	181.3	122.9	98.4	89.8	89.8
Hogs, heavy.....	100	104.8	87.0	117.5	184.8	194.9	205.0	311.8	213.4	208.7	206.7	265.4	175.2	180.4	173.5	172.6
Pacon, short, clear sides.....	100	111.0	87.4	123.6	195.3	230.7	213.4	217.3	225.2	227.6	256.7	265.4	178.7	174.0	173.2	196.1
Hams, smoked, loose.....	100	106.6	97.0	114.5	144.0	177.7	185.5	182.5	202.4	210.2	216.9	231.3	174.7	177.1	184.3	190.4
Lard, prime, contract.....	100	92.7	73.6	119.1	182.7	227.3	234.5	240.0	241.8	216.4	254.5	310.1	254.5	219.1	190.9	190.9
Pork, salt, mess.....	100	105.1	82.3	120.9	188.0	224.3	236.7	215.8	189.1	224.2	244.8	262.1	166.4	199.7	193.3	188.2
Sheep, ewes.....	100	96.8	116.7	139.6	183.5	237.8	239.0	234.2	202.0	203.9	228.0	173.4	182.7	232.0	278.7	288.6
Mutton, dressed.....	100	92.2	105.8	127.2	140.8	186.4	235.9	199.0	146.0	170.9	222.3	164.4	122.3	203.5	200.0	190.3
Butter, creamery, extra.....	100	87.1	84.2	89.0	121.3	157.1	133.9	139.4	178.7	198.4	198.4	165.2	208.4	203.5	200.6	213.9
Eggs, fresh, firsts.....	100	82.7	74.8	98.7	140.7	246.5	146.0	165.5	219.9	256.2	178.3	184.1	251.8	288.5	227.9	199.1
Milk.....	100	85.7	85.7	88.6	142.9	231.4	168.6	154.3	234.3	260.0	188.6	202.9	208.6	242.9	231.4	225.7
<i>(b) Vegetable.</i>																
Wheat, No. 1, northern.....	100	102.6	159.0	133.9	295.4	248.3	248.3	248.3	253.5	254.3	286.2	306.6	300.4	335.4	307.6	315.2
Wheat flour, standard patent.....	100	100.2	153.4	133.1	278.1	220.0	267.8	233.5	222.7	224.1	266.5	265.2	262.5	315.1	295.3	287.2
Corn, No. 2, mixed.....	100	113.6	125.3	120.3	327.0	384.0	394.6	286.4	221.6	224.2	257.4	307.2	224.0	240.5	232.0	262.6
Corn meal.....	100	111.3	109.4	124.0	305.2	302.4	331.9	301.8	210.8	197.0	220.4	280.7	184.5	192.6	188.4	213.8
Oats, standard, in store.....	100	98.1	140.7	107.7	203.2	212.5	231.9	203.5	184.3	173.7	131.1	203.2	187.8	221.5	239.6	239.6
Rye, No. 2.....	100	97.2	162.9	151.9	350.0	301.1	416.4	268.1	255.5	253.6	273.7	244.5	218.2	277.7	246.5	274.2
Rye flour.....	100	88.7	159.5	145.2	329.2	298.0	394.7	302.8	264.4	262.0	290.1	232.1	213.8	275.0	245.5	271.2
Barley, fair to good malting.....	100	85.3	118.9	119.4	222.6	154.9	276.5	180.0	153.1	153.0	181.3	202.9	207.8	239.0	222.4	242.9
Rice, Honduras, head.....	100	105.9	96.1	88.2	137.3	154.9	170.6	154.3	178.4	178.4	170.6	260.8	237.4	249.0	251.0	245.1
Potatoes, white.....	100	196.4	72.3	140.6	386.6	207.2	111.9	168.6	161.7	176.5	187.6	274.1	274.1	426.9	436.2	536.0
Sugar, granulated.....	100	97.7	134.9	174.4	174.4	172.1	169.8	172.1	204.7	204.7	204.7	204.7	204.7	358.1	348.8	318.6
TEXTILES AND LEATHER GOODS.																
Cotton, upland, middling.....	100	102.3	71.9	101.6	203.9	253.1	247.7	243.8	263.9	231.3	228.6	274.2	277.3	307.0	303.1	323.4
Cotton yarn, carded, 10/1.....	100	97.3	72.4	114.5	203.6	242.5	278.7	289.6	276.0	201.4	188.7	267.4	276.5	324.0	338.0	341.6
Sheeting, brown, 19x22.....	100	93.9	82.2	106.8	191.8	234.2	280.5	(*)	(*)	261.6	214.6	300.0	313.7	390.4	(*)	(*)
Bleached muslin, Lonsdale.....	100	103.7	91.5	107.3	195.1	219.5	280.5	304.9	304.9	254.9	214.6	334.1	358.5	393.9	406.1	406.1

[illegible]

* Prior to January, 1918, prices are for gun metal, button.

No quotation.

Standard war flour.

Changes in Cost of Living in 14 Cities in the United States, 1914 to 1919.

THE following table shows the changes in the cost of living from December, 1914, to December, 1919, inclusive, in 14 cities located on the Atlantic and Gulf coasts and on the Great Lakes. These changes are based on actual prices secured by agents of the Bureau of Labor Statistics for each of the periods named.

The first column in the table shows the average per cent of the total family expenditures that is devoted to each of the different groups of items—food, clothing, etc., in the usual family budget.

The succeeding columns show the per cent of increase in prices of the several groups of items in each of the years named, over the prices of December, 1914. It will be noted that from the beginning of the period covered until 1918, inclusive, the increase in the cost of food was, with a very few exceptions, greater than the total increase, but that in 1919 the total per cent of increase was greater than the increase in food except in two cities, thus showing that clothing, rents, miscellaneous items, etc., increased in price in 1919 more rapidly than food.

CHANGES IN COST OF LIVING IN 14 SPECIFIED CITIES FROM DECEMBER, 1914, TO DECEMBER, 1919.

Portland, Me.

Item of expenditure.	Per cent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	41.2	¹ 1.96	18.59	49.83	86.82	91.86
Clothing:						
Males.....		1.09	8.98	31.45	82.27	137.77
Females.....		3.21	10.48	34.15	89.37	156.69
All clothing.....	17.4	2.13	9.72	32.78	85.77	148.49
Housing.....	12.4	.24	.61	2.38	2.48	10.72
Fuel and light.....	6.4	.37	11.39	28.85	67.69	69.77
Furniture and furnishings.....	4.1	6.24	20.94	43.49	110.83	163.69
Miscellaneous.....	18.5	¹ .42	13.83	37.96	65.55	83.18
Total.....	100.0	¹ .42	13.83	37.96	72.23	91.59

Boston, Mass.

Food.....	44.5	¹ 0.33	18.03	45.76	74.88	80.83
Clothing:						
Males.....		6.06	20.95	45.31	112.79	172.05
Females.....		7.76	22.85	49.92	122.54	209.13
All clothing.....	15.5	6.63	21.86	47.53	117.48	192.40
Housing.....	12.8	¹ .07	1.06	1.06	2.76	12.24
Fuel and light.....	5.6	1.12	10.51	29.21	56.56	63.18
Furniture and furnishings.....	3.3	8.40	26.31	58.37	137.62	198.71
Miscellaneous.....	18.3	1.57	15.72	38.13	61.96	81.12
Total.....	100.0	1.57	15.72	38.13	70.60	92.30

¹ Decrease.

CHANGES IN COST OF LIVING IN 14 SPECIFIED CITIES FROM DECEMBER, 1914, TO DECEMBER, 1919—Continued.

New York, N. Y.

Item of expenditure.	Percent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	42.0	1.34	16.26	55.28	82.62	90.95
Clothing:						
Males.....		4.78	20.32	51.40	126.39	201.26
Females.....		4.87	24.73	57.63	137.15	234.97
All clothing.....	16.6	4.82	22.31	54.21	131.25	219.66
Housing.....	14.3	¹ 1.10	¹ 1.05	2.63	6.47	23.39
Fuel and light.....	4.3	¹ 1.06	10.98	19.92	45.47	60.63
Furniture and furnishings.....	3.3	8.43	27.60	56.47	126.51	172.92
Miscellaneous.....	18.7	1.97	14.91	44.68	70.01	95.82
Total.....	100.0	1.97	14.91	44.68	77.28	103.81

Philadelphia, Pa.

Food.....	40.2	0.34	18.92	54.41	80.67	87.21
Clothing:						
Males.....		3.30	16.15	54.11	119.61	204.16
Females.....		3.94	15.90	49.12	101.71	175.88
All clothing.....	16.3	3.60	16.03	51.33	111.16	190.30
Housing.....	13.2	¹ 1.29	¹ 1.72	2.60	8.00	16.74
Fuel and light.....	5.1	¹ 1.81	5.37	21.54	47.94	51.25
Furniture and furnishings.....	4.4	6.94	19.87	49.84	107.69	162.75
Miscellaneous.....	20.8	1.19	14.65	43.81	67.47	88.62
Total.....	100.0	1.19	14.65	43.81	73.86	96.49

Baltimore, Md.

Food.....	42.0	¹ 4.08	20.87	64.35	96.35	92.48
Clothing:						
Males.....		2.46	22.97	49.55	98.66	175.90
Females.....		3.03	25.09	54.75	117.35	183.08
All clothing.....	15.1	2.74	24.00	52.07	107.72	177.43
Housing.....	14.0	¹ 1.18	¹ 1.85	2.96	13.78	25.76
Fuel and light.....	5.0	.49	9.14	25.54	45.97	48.09
Furniture and furnishings.....	4.3	5.59	26.38	60.79	122.34	166.99
Miscellaneous.....	19.7	¹ 1.37	18.51	51.27	78.71	99.39
Total.....	100.0	¹ 1.37	18.51	51.27	84.68	98.40

Norfolk, Va.

Food.....	34.9	0.75	22.38	63.89	86.18	91.49
Clothing:						
Males.....		1.60	10.33	37.15	97.61	143.99
Females.....			1.68	26.02	91.58	168.08
All clothing.....	21.1	.80	5.98	31.55	94.58	158.40
Housing.....	11.8	.07	¹ 1.72	¹ 1.72	38.96	63.26
Fuel and light.....	5.4		17.03	33.30	74.62	89.90
Furniture and furnishings.....	6.7	.62	8.73	38.96	105.51	143.61
Miscellaneous.....	20.2	.61	14.73	45.15	76.75	97.50
Total.....	100.0	.61	14.73	45.15	80.73	106.98

¹ Decrease.

CHANGES IN COST OF LIVING IN 14 SPECIFIED CITIES FROM DECEMBER, 1914, TO DECEMBER, 1919—Continued.

Savannah, Ga.

Item of expenditure.	Per cent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	34.3	¹ 0.26	17.57	50.83	76.22	80.85
Clothing:						
Males.....			25.62	60.03	137.90	199.97
Females.....		1.65	22.21	52.51	128.17	189.94
All clothing.....	18.8	.76	24.06	56.58	133.57	195.86
Housing.....	12.9	¹ 1.44	¹ 3.04	¹ 4.32	5.90	22.04
Fuel and light.....	5.7	¹ 1.30	¹ 1.65	¹ 21.11	37.50	52.21
Furniture and furnishings.....	5.1	1.84	12.75	50.67	128.61	182.06
Miscellaneous.....	23.2	¹ .21	14.49	42.49	67.34	81.97
Total.....	100.0	¹ .21	14.59	42.49	74.98	98.68

Jacksonville, Fla.

Food.....	34.6	¹ 0.26	17.57	50.83	76.22	80.85
Clothing:						
Males.....		10.35	35.06	74.76	136.56	199.39
Females.....		10.61	32.03	68.49	123.10	226.13
All clothing.....	16.8	10.47	33.69	71.92	130.47	217.22
Housing.....	12.3	¹ 6.87	¹ 18.15	¹ 18.65	5.89	22.04
Fuel and light.....	4.6		2.30	15.07	55.19	79.03
Furniture and furnishings.....	5.4	15.13	43.42	73.73	126.47	195.17
Miscellaneous.....	26.3	1.27	14.66	41.63	60.50	80.92
Total.....	100.0	1.27	14.66	41.63	71.52	102.11

Mobile, Ala.

Food.....	39.1	¹ 1.04	19.92	57.32	80.56	98.39
Clothing:						
Male.....		1.77	9.12	37.91	74.64	104.29
Females.....		2.35	8.82	39.72	98.74	144.37
All clothing.....	18.6	2.04	8.98	38.76	85.99	123.71
Housing.....	10.3	¹ 1.86	¹ 4.33	¹ 3.60	11.16	29.53
Fuel and light.....	5.1	(²)	8.76	27.11	57.11	75.55
Furniture and furnishings.....	4.3	4.07	15.29	42.76	108.34	153.34
Miscellaneous.....	22.5	¹ .40	13.82	43.16	72.38	87.02
Total.....	100.0	¹ .40	13.82	43.16	71.37	94.54

Houston, Tex.

Food.....	38.4	¹ 1.04	19.92	57.32	86.13	97.45
Clothing:						
Males.....		3.11	24.76	49.32	117.38	182.12
Females.....		2.13	25.34	53.85	117.28	200.48
All clothing.....	15.2	2.66	25.04	51.49	117.33	192.03
Housing.....	13.2	¹ 2.29	¹ 7.34	¹ 7.72	¹ 1.68	13.37
Fuel and light.....	4.2	¹ 1.85	8.28	22.70	47.46	60.04
Furniture and furnishings.....	5.6	6.12	29.62	62.31	119.93	181.80
Miscellaneous.....	23.4	¹ .29	16.41	44.89	67.55	88.15
Total.....	100.0	¹ .29	16.41	44.89	75.67	101.70

¹ Decrease.² No change.

CHANGES IN COST OF LIVING IN 14 SPECIFIED CITIES FROM DECEMBER, 1914, TO DECEMBER, 1919—Concluded.

Chicago, Ill.

Item of expenditure.	Per cent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	37.8	2.66	25.23	53.42	78.72	93.05
Clothing:						
Males.....		8.51	26.53	51.91	137.06	211.78
Females.....		6.15	21.22	50.03	141.29	232.86
All clothing.....	16.0	7.48	24.21	50.58	138.91	223.99
Housing.....	14.9	1.08	.70	1.36	2.55	14.02
Fuel and light.....	6.0	1.93	6.64	19.34	37.06	40.10
Furniture and furnishings.....	4.4	5.91	19.96	47.45	108.89	175.99
Miscellaneous.....	20.6	3.01	19.51	41.78	58.72	84.26
Total.....	100.0	3.01	19.51	41.78	72.18	100.61

Detroit, Mich.

Food.....	35.2	4.05	26.51	59.69	82.46	99.47
Clothing:						
Males.....		1.70	19.35	46.91	123.66	203.53
Females.....		3.00	18.30	46.46	102.54	163.16
All clothing.....	16.6	2.31	18.86	46.70	113.82	181.79
Housing.....	17.5	2.08	17.52	32.64	39.03	60.15
Fuel and light.....	6.3	1.62	9.94	30.20	47.56	57.86
Furniture and furnishings.....	5.9	8.73	24.50	50.40	107.31	172.61
Miscellaneous.....	18.3	3.51	22.25	49.85	72.53	100.09
Total.....	100.0	3.51	22.25	49.85	78.03	107.87

Cleveland, Ohio.

Food.....	35.6	1.43	26.43	54.33	79.41	92.85
Clothing:						
Males.....		1.60	17.43	42.85	102.73	165.11
Females.....		2.36	18.57	44.65	102.38	173.92
All clothing.....	16.0	1.96	17.97	43.71	102.56	171.23
Housing.....	16.4	.12	.92	11.29	16.49	39.93
Fuel and light.....	4.1	.30	10.04	26.80	51.94	62.91
Furniture and furnishings.....	6.0	4.72	19.67	47.84	102.44	112.28
Miscellaneous.....	21.8	1.42	19.10	42.93	67.07	85.90
Total.....	100.0	1.42	19.10	42.93	71.36	95.05

Buffalo, N. Y.

Food.....	36.1	2.44	30.09	64.07	87.77	94.74
Clothing:						
Males.....		9.11	31.01	59.27	127.93	186.67
Females.....		8.76	27.92	57.54	117.51	189.07
All clothing.....	17.5	8.95	29.58	58.47	123.11	190.78
Housing.....	15.4	1.15	4.70	9.35	20.72	29.04
Fuel and light.....	4.9	1.30	9.50	23.46	49.34	55.66
Furniture and furnishings.....	5.6	7.05	21.13	50.15	106.34	165.42
Miscellaneous.....	20.6	3.53	24.38	51.13	75.96	90.28
Total.....	100.0	3.53	24.38	51.13	80.91	102.65

* Decrease.

National Industrial Conference Board Report on Changes in Cost of Living.¹

THE recent report of the National Industrial Conference Board (Boston) on changes in the cost of living from July, 1914, to November, 1919, is the fifth report prepared by the board on this subject. It includes also changes in the cost of the different budget items for the period July, 1919, to November, 1919. The method of securing data was similar to that of the previous investigations and included replies to questionnaires sent to dealers in clothing, furnishings, and fuel in different sections of the country and to representative persons in regard to rent and car-fare changes. It also included use of the index numbers of retail food prices as compiled by the United States Bureau of Labor Statistics.

Nothing was added by the board to the data already published by the Bureau of Labor Statistics in regard to the changes in the cost of food which had been found to have increased in the entire period 92 per cent.

For the period from July, 1919, to November, 1919, the average increases in rents reported from 156 cities were small. In a number of localities they had remained stationary, though this may be partly accounted for by the fact that in many cases leases for a year had been signed previous to this period. No decreases were reported, however, and the average advance for the country for this five-month period was about 8 per cent, making a total increase since July, 1914, of 38 per cent. As rents are largely a local matter no startling differences in different sections of the country were found, but owing to the very general housing shortage it was the general opinion that there could not be a reduction in rents until this condition is remedied.

The rise of 17.5 per cent in the price of clothing for the summer and fall of 1919 was greater than that for any other item in the budget for the same period, while for the entire period from the beginning of the war the increase was 135 per cent. Price schedules were secured from 195 dry goods and specialty stores in 66 representative cities, although no attempt was made to study the question geographically, since it had already been determined from previous investigations that the locality apparently had no effect on clothing prices. From the average prices in November, 1919, trial clothing budgets for a wage earner and his wife were constructed which represent, not a complete outfit, but the amount of clothing which might be purchased in one year. According to these trial budgets the increase in the man's budget, in November, 1919, over July, 1914,

¹ National Industrial Conference Board. Changes in the cost of living, July, 1914-November, 1919. Boston, December, 1919. 24 pp. Research report No. 25.

was 141.2 per cent, in November, 1919, over November, 1918, 26.8 per cent, and in November, 1919, over July, 1919, 20 per cent. The percentage increases in the woman's budget for the same periods were, respectively, 129.5, 22, and 15.3.

The advance in the combined average cost of fuel, heat, and light in November over July, 1919, was 4 per cent, while the advance for the entire period since July, 1914, was 48 per cent. Coal alone advanced about 5 per cent for the five-month period, but this was somewhat offset by the fact that there was considerably less increase in the price of gas and electricity. Information in regard to coal prices was secured from 114 dealers in 42 cities in all sections of the country, but data in regard to the cost of light were secured in less detail, the American Gas Association and the National Electric Light Association supplying estimates of the price changes.

Miscellaneous items, which include household furnishings, tobacco and confectionery, medical care, reading material, amusements, church contributions, insurance and organization dues, and car fare are estimated to have advanced 75 per cent over the whole period, and 7 per cent since July, 1919.

In order to determine the total increase in the cost of living the average percentages of increase for the different items of the budget were weighted according to the relative importance of each item in the family budget. The following table shows the percentage increases in the cost of living in average communities between July, 1914, and November, 1919.

PER CENT OF INCREASE IN COST OF LIVING, NOVEMBER, 1919, OVER JULY, 1914.

Budget items.	Relative importance in family budget.	Increase in cost between July, 1914, and November, 1919.	Increase as related to total budget.
All items.....	100.0	-----	82.2
Food.....	43.1	92	39.7
Shelter.....	17.7	38	6.7
Clothing.....	13.2	135	17.8
Fuel, heat, and light.....	5.6	48	2.7
Sundries.....	20.4	75	15.3

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase over July, 1914, in the cost of food and general family expenditure for April of each year, 1915 to 1920, and for each month in 1920. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or frozen; bacon; fish; flour;

bread; tea; sugar; milk; butter, fresh and salt; cheese; margarine; eggs; and potatoes.

The table gives percentage of increase, and is not one of relative prices, as is the table given for the United States. When making comparisons this should be borne in mind, and to obtain the relative prices it is necessary to add 100 to the percentage as given, e. g., for January, 1920, the increase in cost of food is 136 per cent, the relative price being 236.

The figures represent two comparisons: First, the increase in prices, based on the same kinds and quantities as used in July, 1914; second, the increase, based on the change in the standard of living, resulting from a substitution of one kind of food for another to meet war-time conditions.

The table shows that retail prices of food were 135 per cent higher in April, 1920, than in July, 1914, and that the increased cost of all items in the family budget was 130 to 135 per cent.

PER CENT INCREASE IN COST OF FOOD AND ALL ITEMS IN FAMILY BUDGET IN GREAT BRITAIN BASED ON JULY, 1914.

[Compiled from the British Labor Gazette.]

Year and month.	Food.		All items in family budget.	
	Retail prices (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in consumption).	Cost (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in consumption).
April, 1915.....	24			
April, 1916.....	49			
April, 1917.....	94	61	¹ 65	
April, 1918.....	106	44	² 90-95	55
April, 1919.....	113	87	³ 110	95
1920.				
January.....	136	115	125	115
February.....	135	112	130	115
March.....	133	107	130	115
April.....	135	(⁴)	130-135	(⁴)

¹ Not including taxes.

² The increase, excluding additional taxation, is 5 per cent less.

³ The increase, excluding additional taxation, is 7 per cent less.

⁴ No longer calculable, mainly owing to decontrol.

Retail Prices of Foodstuffs and Firewood in Bucharest, Roumania, 1911, 1914, and 1919.

A RECENT issue of the Bulletin of the General Statistical Office of Roumania ¹ publishes a comparative table of retail prices of foodstuffs and firewood in Bucharest in October, 1911, 1914, and 1919. Index numbers based on prices in October, 1911, are given. The table is reproduced in part:

¹ Buletinul Statistic al Romaniei. Seria IV, Vol. XIV, No. 2. Bucharest, 1920, p. 292.

AVERAGE RETAIL PRICES OF FOODSTUFFS AND FIREWOOD IN BUCHAREST,
ROUMANIA, OCTOBER, 1911, 1914, AND 1919.

[Par value of 1 lei=19.3 cents.]

Article.	Unit.	Average prices.			Per cent of increase.		
		October, 1911.	October, 1914.	October, 1919.	October, 1914, over October, 1911.	October, 1919, over October, 1911.	October, 1919, over October 1914.
		<i>Lei.</i>	<i>Lei.</i>	<i>Lei.</i>			
Corn meal.....	Kilogram.....	0.16	0.25	1.50	56	837	500
Bread, first quality.....	do.....	.26	.33	3.50	26	1,246	968
Bread, second quality.....	do.....	.23	.28	1.00	21	339	263
Beef.....	do.....	.90	.90	9.50		955	955
Pork.....	do.....	1.40	1.20	10.50	115	650	782
Mutton.....	do.....	.80	.80	6.50		712	712
Chicken.....	Each.....	1.85	1.75	18.00	16	872	934
Duck.....	do.....	1.50	1.80	19.00	20	1,166	955
Goose.....	do.....	3.20	4.00	28.50	25	790	612
Turkey.....	do.....	5.40	9.20	47.50	70	779	417
Carp, fresh.....	Kilogram.....	.90	.80	5.25	112	483	562
Carp, salted.....	do.....	.90	1.05	6.15	16	583	488
Eggs.....	Per 100.....	6.75	9.00	70.00	33	937	671
Milk.....	Liter.....	.35	.40	2.50	14	614	526
Cheese.....	Kilogram.....	1.40	1.90	22.00	35	1,471	1,063
Lard.....	do.....	1.90	1.40	27.00	126	1,321	1,820
Olive oil.....	do.....	2.00	2.50	16.50	25	725	560
Olives.....	do.....	1.10	1.30	12.00	18	990	823
Sugar.....	do.....	1.25	1.35	12.50	8	900	825
Rice.....	do.....	.55	.50	12.00	110	2,081	2,323
Coffee.....	do.....	2.55	3.00	17.00	17	566	469
Wine.....	Liter.....	1.00	1.30	9.50	30	850	630
Brandy.....	do.....	1.20	1.40	12.50	16	940	796
Vinegar.....	do.....	.50	.60	2.50	20	400	316
Beans, white.....	Kilogram.....	.35	.35	2.15		514	514
Potatoes.....	do.....	.10	.14	.70	40	600	400
Onions.....	do.....	.10	.35	.55	250	450	57
Nuts.....	do.....	.55	.60	4.50	7	718	664
Firewood, oak.....	100 kilograms.....	3.65	3.85	33.00	5	804	760
Firewood, beech.....	do.....	3.45	3.60	23.00	4	711	679

¹ Decrease.

According to the preceding table there has been an enormous increase in the cost of foodstuffs in Roumania since 1911. Up to the outbreak of the European war the increase in prices was relatively small, and in the case of some very important foodstuffs such as pork, chicken, fish, lard, and rice, a decrease in price is shown. Since 1914, however, prices have risen so rapidly that in October, 1919, the price increases over October, 1911, of the 28 articles listed in the table vary between 339 and 2,081 per cent. The articles showing an increase in price in excess of 1,000 per cent are rice (2,081 per cent), cheese (1,471 per cent), lard (1,321 per cent), bread, first quality (1,246 per cent), and duck (1,166 per cent). Of other important foodstuffs, the price of beef increased 955 per cent, of pork 650 per cent, mutton 712 per cent, eggs 937 per cent, milk 614 per cent, sugar 900 per cent, coffee 566 per cent, and potatoes 600 per cent.

WAGES AND HOURS OF LABOR.

Wages and Hours of Labor in Brick, Chemical, Glass, Leather, Paper, Pottery, and Rubber Industries in 1919.

IN THIS article are presented the results of the investigation of wages and hours in various industries which was carried on as part of the industrial survey of 1919. The industries included are the manufacture of brick, chemicals, glass, leather, paper and pulp, pottery, and rubber goods.

Under the general heading "chemical industry" are included establishments engaged in the manufacture of general chemicals, explosives, pigments, fertilizer, food products, petroleum products, soap, and sugar. In the case of these industries, however, while the products are very unlike, the processes involved are so few and so similar that it was found feasible to combine the data for all the chemical establishments included in the survey under one set of occupation terms.

The glass industry was subdivided according to the nature of the product. In the survey are included establishments engaged in the manufacture of bottles, lighting fixtures, plate glass, table ware, and window glass. In tabulating the material it was found possible in the case of some occupations to combine the data from different branches of the industry, while other occupations were characteristic of one or another separate branch. In the section of Table 4 relating to the glass industry the letters following the occupation terms are the initials of the branches of the glass industry in which the occupations are found. Those occupations which have no letter following them are found in all five subdivisions of the glass industry.

The investigation of the leather industry was confined to establishments tanning sole leather, heavy upper leather, such as cow and calf skins, and light upper leather made from the skin of the goat and the kid. In the table the occupations found in each branch of the industry are tabulated separately.

The report on the investigation of the paper and pulp industry is naturally subdivided into two parts—one dealing with the manufacture of pulp and the other with the manufacture of paper. In

the latter division of the industry were included plants manufacturing news print paper, wrapping and blotting paper, book paper, and writing paper. Processes of manufacture are so similar that it was found possible to combine the occupations for all subdivisions of the pulp industry and likewise those for the paper industry.

Four branches of the manufacture of rubber goods were included in the survey—namely, the manufacture of tires and tubes, of boots and shoes, of mechanical goods, and of rubber hose. As in the case of the glass industry, it was found necessary in the rubber industry to indicate in which branches each of the selected occupations was found. The letters following the occupation titles refer as follows: "F," to the manufacture of footwear; "H," to the manufacture of hose; "M," to the manufacture of mechanical goods; and "T," to the manufacture of tires and tubes. Occupations with no letters following them are found in all branches of the industry.

In the case of the brick and pottery industries no significant subdivision existed, and the material for each industry is presented in a single table.

Table 1 shows the number of establishments and the number of employees in each industry covered by the survey in each State in which the industry was included. The States to be covered in the survey of each industry were selected on the basis of the number of employees shown by the Census of Manufactures of 1914. No attempt was made, however, to apportion the representation in the different States exactly in proportion to the number of employees in them; but enough establishments were included in each State to give fairly typical results for the State. Undoubtedly the lapse of time, and especially the disturbing effects of the war, have rendered obsolete much of the data applying to conditions in 1914, but there is no more recent information available as to the number of employees in the industries in the different States.

TABLE 1.—NUMBER OF ESTABLISHMENTS AND NUMBER OF EMPLOYEES, BY STATE AND INDUSTRY.

State.	Brick.		Chemicals.		Glass.		Leather.		Paper and pulp.		Pottery.		Rubber.	
	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.	Es- tab- lish- mts.	Em- ploy- ees.
Alabama.....			11	983										
California.....	3	180	4	191			4	454						
Connecticut.....			2	77					6	193			2	1,684
Delaware.....							2	556					1	199
Florida.....			3	227										
Georgia.....			13	1,602										
Illinois.....	4	316	5	1,067	3	615	2	725					2	296
Indiana.....	4	194	3	2,533	10	2,265								
Iowa.....	5	255	5	352										
Kansas.....			5	582										
Louisiana.....			11	2,491										
Maine.....								5	1,038					
Maryland.....	2	107	5	791	2	474								
Massachusetts.....			4	654			6	1,209	13	1,549			5	5,386
Michigan.....	3	111	4	395			8	688	7	609			1	2,242
Minnesota.....								4	350					
Missouri.....	5	244	5	575										
New Hampshire.....								4	337					
New Jersey.....	1	32	4	2,961	2	1,268	4	930	3	99	4	576	5	1,759
New York.....	1	58	6	1,325	10	1,043	4	345	11	734	2	792		
North Carolina.....			7	1,132										
Ohio.....	3	102	12	1,536	10	2,462			8	741	5	1,017	4	4,281
Oklahoma.....			6	735										
Oregon.....								3	687					
Pennsylvania.....	4	204	10	1,306	16	2,793	14	2,055	9	716			1	320
South Carolina.....			9	1,364										
Tennessee.....			8	855										
Texas.....			8	1,350										
Vermont.....								3	281					
Virginia.....			6	1,262	2	285								
Washington.....								2	377					
West Virginia.....					13	2,158					4	872		
Wisconsin.....			7	1,736			7	1,997	7	619			2	1,822
Total.....	35	1,803	163	28,982	68	13,363	51	8,959	85	8,330	15	3,257	23	17,989

The attempt was made to secure as many schedules as possible having pay rolls falling within the first five months of 1919. In some instances, however, special circumstances made it necessary to take schedules for earlier periods. As industry was in an unsettled state immediately after the close of the war and conditions were rapidly changing, the exact date of the material presented is a matter of more importance than it would be in a normal year. Therefore, there is presented in Table 2 information as to the number of pay-roll periods in each industry falling within each calendar month. The table indicates that of the 440 schedules included in the seven industries 31 antedated 1919 and 3 ended early in June of the same year. Ninety-two per cent of the schedules fell within the first five months of 1919. All the material is presented as of the year 1919. In none of the industries, so far as could be ascertained, were there any changes in the rates of wages during the progress of the survey.

TABLE 2.—NUMBER OF PAY-ROLL PERIODS IN SPECIFIED MONTHS, 1918 AND 1919.

Industry.	Number of pay-roll periods in—										Total number of pay- roll periods.
	1918				1919						
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	
Brick.....					1		8	14	12		35
Chemicals.....	1	5	1	7	43	10	66	17	13		163
Glass.....		1		1	7	18	17	13	11		68
Leather.....					2	12	12	18	5	2	51
Paper and pulp.....		3	4	5	9	21	16	10	17		85
Pottery.....							5	9		1	15
Rubber.....			1	2	1	7	10	2			23

The presentation of the material relating to hours and earnings is complicated by the fact that in each of the industries here described pay rolls of different lengths were found. In computing earnings on an hourly basis the length of the pay-roll period is of little importance, but in all tables presenting figures relating to hours the exact length of the pay-roll period becomes of importance. Table 3 indicates how many pay-roll periods of each specified number of days were used in the computations on which the material presented in the final table is based. It will be seen that approximately three-fourths of the periods were 6 days in length. The other one-fourth fell under the general heading of 2 weeks or one-half month. There were periods varying all the way from 11 days to 14 days in length.

TABLE 3.—SCHEDULE DISTRIBUTION BY NUMBER OF WORKDAYS IN PAY-ROLL PERIOD.

Industry.	Total.	Number of schedules in pay-roll period covering—				
		One week or 6 workdays.	Two-weeks, one-half month, or—			
			11 work- days.	12 work- days.	13 work- days.	14 work- days.
Brick.....	35	20		8	8	1
Chemicals.....	163	120		7	24	12
Glass.....	68	39		22	6	1
Leather.....	51	32	2	2	13	2
Paper and pulp.....	85	72		8	5	
Pottery.....	15	6		9		
Rubber.....	23	19		1	3	

At the time of the survey some industries were very active and others considerably depressed. Every effort was made to confine the survey to establishments working full time. In the case of two of the industries included in this report, however, that was found to be impossible, and in using the figures in Table 4 with respect to hours

of operation allowance should be made for the fact that in the glass industry two part-time schedules were included in the State of New York and one each in New Jersey and Pennsylvania; while in the rubber industry one part-time schedule was included in Connecticut. The other schedules in all industries represent full-time pay-roll periods.

The information concerning hours and earnings on which the tables are based was obtained directly from the pay rolls or other records of the companies by agents of the Bureau. Other information was obtained from responsible officials in personal interviews. Wherever the records of the company failed to indicate the time actually worked by pieceworkers during the selected pay-roll period, arrangements were made to have such a record kept for a future period from which record data were afterwards copied. In all cases the figures copied by the agents represented the hours actually worked and earnings actually received by individual employees during the selected pay-roll period.

In Table 4 (pp. 101 to 107) are given the fundamental facts concerning the hours and earnings of employees in the selected occupations of each of the seven industries enumerated above. The first three columns of the table indicate the sex and occupation of the employees to whom the later figures in the same line refer, and also the number of establishments and the number of employees whose records were used in computing the averages. The rest of the table divides naturally into two sections, the former dealing with hours, the latter with earnings.

The facts about hours are shown in six columns. The first of these columns shows the average number of hours actually worked during the pay-roll period by employees on one-week pay rolls; the second shows the average number worked by employees on two-week and half-month pay rolls. It will be seen that there is no constant ratio between the figures for the same occupation in the two columns. This is to be explained partly by the fact that the figures for the two columns necessarily come from different establishments, partly by the fact that the second of the two columns contains data from pay rolls varying in length from 11 to 16 days; and partly by the fact that longer pay rolls show a constant tendency toward shorter average hours of actual work.¹

The two groups of employees are combined in the next column. This column shows the average number of hours per week day worked by the employees in each occupation. This figure is obtained for each employee in the occupation by dividing the number of hours

¹ For a discussion of the effect of the lengthening of the pay-roll period upon average hours see MONTHLY LABOR REVIEW, January, 1920, p. 121.

worked by him during the pay-roll period by the number of week days in the period, adding the daily hours of all the employees in the occupation, and dividing the sum by the number of people in the occupation. The resulting quotient, average hours worked per week day, is the number of hours per day that each employee in the industry would have worked if all had worked six days a week and no more, and if all had worked the same number of hours on each week day.

By multiplying the average hours per week day by six the figures in the column "Average hours worked per week" are obtained. In the next column are shown the average full-time hours per week in each occupation. By comparing average hours worked per week with average full-time hours per week are obtained the figures in the last column relating to hours, the column headed "Per cent of full time worked."

The last four columns of the table relate to earnings. In the first two of these columns are given the average earnings actually received during the pay-roll period by those on one-week pay rolls and by those on two-week and half-month pay rolls. These incommensurable figures are changed to a comparable form by reducing them to average hourly earnings, and the result for all the employees in each occupation is shown in the column bearing that heading.

Finally, in the last column of the table, are shown the average earnings per week for employees in each occupation. This figure was first computed for each employee by dividing his earnings for the pay-roll period by the number of week days in the period and multiplying the quotient by six. The sum of the figures thus obtained for all the employees in the occupation divided by the number of people in the occupation is the average earnings per week for the occupation. It is a hypothetical figure. It represents what each employee in an occupation would have earned in a week if all employees in the occupation had earned the same amount on each week day of the pay-roll period, and if any one employee in the occupation had earned the same amount per day as any other employee in the same occupation.²

A figure for average earnings per week may be obtained by multiplying the average hours per week of an occupation by the average earnings per hour in the same occupation. Weekly earnings obtained in that way may vary considerably from the figures given in the table. Where this variation occurs, however, it is entirely due to additions or subtractions necessarily involved in handling continuing decimals. The two methods are fundamentally identical, as

² For a fuller discussion of the significance and limitations of some of the figures shown in the tables see MONTHLY LABOR REVIEW, April, 1920, pp. 97-99.

may be seen from the following analysis of them. The formula for the method just referred to may be stated as follows:

$$\text{Earnings per week} = \text{hours per week} \times \text{earnings per hour.}$$

$$\text{Hours per week} = 6 \times \text{hours per day} = 6 \times \frac{\text{total hours}}{\text{number of week days}}.$$

$$\text{Earnings per hour} = \frac{\text{total earnings}}{\text{total hours}}.$$

$$\therefore \text{Earnings per week} = 6 \times \frac{\text{total hours}}{\text{number of week days}} \times \frac{\text{total earnings}}{\text{total hours}}.$$

This formula indicates the successive operations involved in computing actual weekly earnings by the method of multiplying hours per week by earnings per hour. It will be seen, however, that this formula readily reduces to the simpler form—

$$6 \times \frac{\text{total earnings}}{\text{number of week days}}.$$

The last formula is exactly the one used in applying the method followed in the table.

The results obtained by this method are substantially correct, but can not lay claim to absolute accuracy. One source of possible error should be pointed out. The practice of working fewer hours on Saturday than on other week days, while by no means universal, is widely prevalent; and the number of hours worked on Saturday varies more or less from establishment to establishment. Wherever fewer hours are worked on Saturday than on other days, the theoretical figure for actual weekly earnings described above will express exactly what it professes to express (namely the amount that would have been earned in a week if the earnings had been uniformly distributed), only in the case of employees for whom Saturdays constituted one-sixth of the total number of days worked by them. In all other cases the figure will vary more or less from theoretical exactness. If the number of Saturdays exceeds one in six, the computed weekly earnings will be somewhat too low; if the number is less than one in six, the earnings will be correspondingly high. Careful experiment has shown, however, that these variations offset one another so largely that the net result is a variation of a few cents at the most in the weekly average for the group, a variation so slight that it may be entirely disregarded.

The earnings represented in the column of earnings per week are average actual earnings. No attempt has been made to compute average full-time weekly earnings on account of the difficulties involved in determining their amount. Such earnings should indicate how much the employees represented in the table would have earned if they had worked full time and no more. In the days when piece-workers and time workers alike were paid at a uniform rate for all

their work regardless of the number of hours per day they worked or the amount of work they turned out, actual earnings of employees for any number of hours per week could be readily and accurately changed into corresponding full-time earnings per week. The prevalence of a higher rate for overtime work and of a great variety of bonus systems in the industrial world of to-day makes the process of changing actual earnings to full-time earnings laborious and the results problematical.

Overtime pay presents few theoretical difficulties. If the exact number of hours of overtime work and the overtime rate is reported for each employee, it is possible to deduct from the figures reported for total hours and total earnings the overtime hours and earnings, and from the remainders to compute an hourly rate for regular time. But the practical difficulties encountered in attempting to determine the overtime hours and earnings of each employee are great. Overtime hours can not be ascertained by subtracting the full-time hours of an employee for the pay-roll period from the hours actually worked by him. Overtime is a matter of daily hours, and overtime hours on one day of the pay-roll period may be offset by less than full-time hours on another day. It frequently happens that an employee whose total hours worked during the pay-roll period are less than the full-time hours of the period still has a considerable amount of overtime to his credit. Moreover, the pay rolls of many establishments afford no indication of the amount of overtime paid for. The extra pay for overtime is frequently handled in practice by "boosting" the hours. For example, in an 8-hour establishment that pays at the rate of time-and-a-half for overtime an employee who works 10 hours in a day is credited on the pay roll with 11 hours. By this method the total earnings of the employee for the pay period can be computed by multiplying his total hours as thus measured by his regular hourly rate. In many cases it is only by obtaining the time record of the employee day by day that overtime hours can be discovered. In establishments in which records are carelessly kept it is not always possible even in that way to determine overtime beyond possibility of mistake.

The effect of computing full-time earnings by the use of an hourly rate containing any element of extra pay for overtime is obviously to show full-time earnings more or less in excess of the amount that could actually be earned in regular time only. An additional difficulty is presented in the case of employees working overtime and receiving a bonus. It becomes necessary to determine for each such employee how much bonus, if any, he would have received if he had performed no overtime work. Sometimes it is readily seen that the bonus would have been earned in regular time. Such is the case, for

example, with an attendance bonus, which is usually paid for regularity of attendance during regular time only. A production bonus, however, can not be so readily apportioned. It will be obvious in some cases that all of it was earned in overtime, but in other cases an approximate apportionment of the bonus between regular time and overtime is the nearest approach that can be made toward determining regular-time earnings.

Still more hopeless would be the attempt to determine how much of such a production bonus would have been earned in full regular time by an employee who worked less than full time in the pay-roll period for which the records were copied and consequently earned no bonus for that period. Production bonus systems are very frequently so arranged that an employee of average ability and industry will earn some bonus if he works full time. But in the case of any individual employee who works less than full time during a pay-roll period there is obviously no possible method of determining how much bonus he would have earned if he had worked exactly full time. For such an employee no method of handling the bonus question would give results which could be depended upon as even approximately accurate.

The purpose of dwelling at length upon the impossibility of making an accurate determination of full-time earnings from the pay-roll data of employees under modern conditions is only partly to explain the omission of figures for such earnings from the following table. It is intended primarily to bring out and emphasize the fact that it is entirely inadmissible to compute full-time earnings for employees in any occupation shown in the table by multiplying full-time hours per week by earnings per hour. For, while the former figure is definite and entirely adapted to the purpose in hand the latter represents the average actual hourly earnings of employees, some of whom worked more than full time and others less and whose average hourly earnings for the period, therefore, may be either more or less than they would have been if the same employees had worked full regular time and no more.

In Table 4 are set forth for each industry in turn the facts concerning hours and earnings referred to in the preceding paragraphs. The chief value of the table lies in its presentation of these facts on a comparable weekly basis. The derivative figure for per cent of full time worked sheds some light on the question of the regularity with which modern industrial operations are carried on. In using the figures of the table for purposes of comparison between different industries or different occupations, due weight should be given to the conditions under which the information was gathered, as set forth in the earlier part of this article.

TABLE 4.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN SPECIFIED INDUSTRIES IN 1919, BY SEX, OCCUPATION, AND PAY-ROLL PERIOD.

Brick.

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full time worked.	Average earnings actually made—			
			In weekly pay period.	In biweekly or semi-monthly pay period.	Per week day.	Per week.			In weekly pay period.	In biweekly or semi-monthly pay period.	Per hour.	Per week.
MALES.												
Brick machine tenders.....	34	41	52.8	114.6	8.9	53.4	99	54.2	\$24.74	\$55.71	\$0.484	\$25.62
Grinding machine tenders.....	33	63	48.4	105.2	8.2	49.2	92	53.2	19.67	48.91	.438	21.18
Kiln firemen.....	34	160	69.5	135.8	11.0	66.0	90	73.5	27.65	55.52	.423	27.06
Kiln setters.....	35	198	42.1	88.6	7.0	42.0	78	53.8	22.46	52.37	.538	23.21
Laborers.....	35	844	48.9	90.5	7.7	46.2	86	53.7	17.75	39.86	.423	18.27
Leaders and wheelers.....	31	276	40.0	87.0	6.7	40.2	51.9	51.9	21.97	48.79	.561	22.53
Off bearers.....	34	178	40.8	94.6	7.0	42.0	79	52.9	17.10	45.45	.430	18.77
Puggers.....	34	43	43.3	96.7	7.9	47.4	88	53.6	20.26	48.29	.469	21.64
Total.....	35	1,803	47.7	95.4	7.8	46.8	85	55.1	20.00	45.35	.464	20.64

Chemicals.

MALES.											
Foremen, chemical operations.....	124	802	62.2	117.5	9.6	57.6	99	\$36.35	\$88.25	\$0.674	\$38.50
Foremen, mechanical operations.....	121	680	59.5	121.3	9.6	57.6	84	28.38	79.71	.557	32.24
Heater men.....	53	1,596	59.3	103.3	8.3	49.8	86	29.51	62.25	.582	28.78
Laborers.....	162	16,330	48.0	100.7	7.9	47.4	83	18.15	44.91	.390	18.70
Process men, assistant.....	142	5,442	55.9	113.4	8.9	53.4	97	24.47	63.99	.500	26.54
Process men, primary.....	50	929	52.4	116.2	8.7	52.2	94	31.03	84.06	.683	35.66
Process men, secondary.....	137	2,494	53.4	116.5	9.3	55.8	98	23.18	68.12	.544	30.12
Total.....	163	28,283	50.9	108.4	8.4	50.4	89	20.90	59.70	.457	23.24
FEMALES.											
Laborers.....	20	699	45.9	12.1	7.4	44.4	84	12.35	30.31	.272	12.70

TABLE 4.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN SPECIFIED INDUSTRIES IN 1919, BY SEX, OCCUPATION, AND PAY-ROLL PERIOD—Continued.

Glass.

[The branch of the industry in which each occupation is found is indicated as follows: B=bottles; L=lighting ware; P=plate glass; T=Table ware; W=window glass.]

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked--				Full-time hours per week.	Per cent of full time worked.	Average earnings actually made--			
			In weekly pay period.	In biweekly or semi-monthly pay period.	Per week day.	Per week.			In weekly pay period.	In biweekly or semi-monthly pay period.	Per hour.	Per week.
MALES.												
Batch mixers	65	224	155.5	104.8	8.9	53.4	157.2	93	\$21.19	\$46.71	\$0.419	\$21.77
Blockers (L., T.)	8	45	145.0	82.0	7.4	44.4	149.8	89	34.12	86.46	.815	35.34
Blowers.	36	1,050	138.2	78.9	6.8	40.8	147.7	80	38.24	65.94	.808	33.09
Cappers (W.)	4	54	46.3	111.0	7.9	47.4	50.0	95	29.27	59.81	.625	29.35
Cranemen (P.)	3	19	.....	143.7	10.9	65.4	75.2	87	.....	66.41	.476	30.06
Cutters, decorative (L., T.)	10	113	46.5	94.8	7.8	46.8	52.7	89	27.34	54.62	.590	27.34
Cutters, plate (P.)	3	27	.....	137.3	10.3	61.8	63.6	97	.....	59.40	.432	26.81
Cutters, rough plate (P.)	3	12	.....	101.7	7.7	46.2	74.0	62	64.03	55.88	1.094	64.03
Cutters, window (W.)	3	52	58.8	.....	9.8	58.8	60.7	97	.....	.....	.....	64.03
Decorators (L., T.)	12	47	47.0	102.8	8.2	49.2	51.3	96	23.85	55.39	.508	25.32
Finishers (B., L., T.)	15	162	142.5	79.9	6.8	40.8	147.2	86	31.36	75.34	.784	32.02
Flatfiners (W.)	3	32	53.4	.....	8.9	53.4	55.7	96	69.83	.....	1.343	69.83
Foot casters (T.)	3	9	49.9	89.3	10.8	64.8	46.1	89	31.96	70.78	.803	32.72
Furnace men	62	365	72.8	118.2	10.8	64.8	70.8	92	28.19	49.64	.407	25.78
Gas makers	30	271	65.4	118.9	10.3	61.8	67.5	92	26.69	51.47	.422	25.92
Gatherers	20	484	137.7	80.2	6.3	37.8	146.6	81	28.71	63.64	.731	29.26
Grinders and polishers (P.)	3	40	.....	146.2	10.6	63.6	73.8	86	.....	65.03	.429	29.13
Handlers (T.)	4	11	43.9	93.5	7.5	45.0	46.8	96	39.18	94.01	.945	42.74
Labors, boy and factory	67	3,488	142.2	76.4	7.1	42.6	150.2	85	14.22	26.10	.354	13.72
Labors, common.	67	2,009	50.8	101.5	8.3	49.8	58.5	85	17.50	37.88	.354	17.41
Layers (P.)	3	90	.....	144.7	10.8	64.8	72.9	89	.....	73.07	.498	32.91
Leer men.	60	381	50.8	107.3	8.6	51.6	56.1	92	19.43	44.60	.396	20.11
Machine operators (B., L., W.)	39	920	46.7	148.4	7.5	45.0	51.3	88	32.73	67.53	.773	33.06
Melters (P.)	3	16	.....	153.6	10.8	64.8	77.0	84	.....	70.78	.495	31.52
Mold makers (B., L., T.)	45	265	150.5	100.2	8.2	49.2	148.6	101	34.48	71.64	.698	34.61
Packers	61	1,071	52.3	98.4	8.2	49.2	56.1	88	21.60	40.87	.421	20.52
Pressers (B., L., T.)	15	180	40.2	77.9	6.6	39.6	46.6	85	34.15	66.65	.850	33.92
Sand blasters (L.)	4	11	49.8	118.0	8.4	50.4	50.2	100	21.33	55.25	.431	21.96
Skimmers (P., W.)	6	41	45.2	124.3	8.5	51.0	61.3	83	29.39	65.11	.582	30.10
Splitters (W.)	4	27	41.6	96.7	7.2	43.2	51.6	84	21.52	51.37	.516	22.45
Total	68	11,506	46.7	92.2	7.8	46.8	53.7	87	22.06	46.24	.500	22.19

FEMALES.												
Decorators (L., T.)	11	127	44.8	106.6	7.7	45.2	49.9	93	10.95	25.52	.246	11.31
Laborers, girl and factory	40	1,222	45.2	78.3	7.3	43.8	50.9	86	9.21	21.92	.219	9.62
Packers	23	508	46.8	92.0	7.0	42.0	54.6	77	9.38	26.51	.243	11.45
Total	47	1,857	45.4	86.4	7.2	43.2	51.9	83	9.38	24.40	.227	10.23
Leather.												
MALES.												
Heavy upper.												
Beam hands	15	107	51.5	117.8	8.6	51.6	54.0	96	\$27.64	\$38.29	\$0.532	\$27.43
Butlers	10	129	45.5	112.2	8.3	49.8	58.0	86	27.43	58.23	.538	27.04
Finishers	10	201	51.6	135.3	8.6	51.6	54.4	95	27.20	72.29	.564	29.10
Fishers and unfishers	14	160	46.0	118.7	8.0	48.0	52.9	91	26.49	60.25	.569	26.78
Glazers	11	105	33.4	108.0	6.5	39.0	53.7	73	18.32	47.31	.552	19.43
Laborers, all departments	15	1,439	51.0	117.2	8.7	52.2	55.7	94	24.00	48.82	.451	22.70
Putters-out, hand	7	80	43.6	111.5	7.9	47.4	55.2	86	27.96	54.75	.579	26.61
Putters-out, machine	9	49	46.4	119.2	8.4	50.4	56.2	90	21.30	48.58	.468	21.82
Seasoners	15	294	49.2	108.0	8.2	49.2	54.4	90	24.21	54.45	.502	24.36
Shavers	9	105	47.5	110.1	8.1	48.6	55.3	88	33.34	56.52	.637	30.59
Sorters and measurers	15	182	50.1	115.8	8.4	50.4	56.6	100	23.39	48.58	.458	22.96
Splitters	14	131	48.1	112.6	8.3	49.8	56.3	88	24.56	61.15	.528	26.36
Stakers, tacks and stretchers, hand	14	320	48.9	100.7	8.0	48.0	55.6	86	25.92	52.01	.516	24.86
Stakers, machine	14	150	43.6	111.4	7.6	45.6	54.0	84	24.59	63.55	.570	26.03
Light upper.												
Fishers and unfishers	10	124	45.2	105.2	7.6	45.2	49.2	92	25.78	---	.561	25.78
Glazers	11	289	47.2	---	7.9	47.2	50.5	93	36.85	---	.738	36.85
Laborers, all departments	12	766	47.3	---	7.9	47.3	49.1	96	24.99	---	.526	24.99
Putters-out, machine	9	110	45.5	---	7.6	45.5	49.4	92	20.41	---	.444	20.41
Seasoners	6	59	44.1	---	7.2	44.1	51.1	86	22.28	---	.533	22.28
Shavers	10	59	40.4	---	6.7	40.4	49.4	82	26.35	---	.648	26.35
Stakers, hand	9	101	39.5	---	6.6	39.5	50.9	78	26.20	---	.658	26.20
Stakers, machine	11	189	45.9	---	7.6	45.9	49.8	92	29.84	---	.665	29.84
Trimmers	8	75	48.4	---	8.1	48.4	49.4	98	29.21	---	.599	29.21
Sole.												
Bark grinders	17	54	49.1	102.6	8.0	48.0	53.5	90	20.88	38.04	.403	19.20
Beam hands	23	166	49.4	104.4	8.1	48.6	52.5	93	26.68	51.05	.517	24.91
Fishers and unfishers	23	123	44.7	99.6	7.6	45.6	52.6	87	26.01	46.48	.523	23.44
Laborers, all departments	24	1,986	47.0	101.3	7.9	47.4	52.3	91	24.97	44.96	.482	22.49
Liquor runners	21	50	52.5	127.5	9.2	55.2	53.7	103	25.96	56.71	.480	26.16
Operators, rolling-machine	23	273	49.0	100.7	7.9	47.4	52.3	91	30.84	51.62	.560	26.30
Setters out	17	84	52.2	116.3	8.8	52.8	53.0	100	25.59	47.21	.456	23.96
Total	51	7,970	47.3	107.6	8.1	48.6	53.0	92	26.03	49.49	.518	24.72
Several employees omitted.												

Several employees omitted.

TABLE 4.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN SPECIFIED INDUSTRIES IN 1919, BY SEX, OCCUPATION, AND PAY-ROLL PERIOD—Continued.

Leather—Concluded.

Sex and occupation.	Number of estab-lish-ments.	Number of em-ployees.	Average hours actually worked—				Full-time hours per week.	Per cent of full time worked.	Average earnings actually made—			
			In weekly pay period.	In biweekly or semi-monthly pay period.	Per week day.	Per week.			In weekly pay period.	In biweekly or semi-monthly pay period.	Per hour.	Per week.
FEMALES.												
Heavy upper.												
Glaziers.....	3	64	46.3	98.2	7.6	45.6	59.1	77	\$17.33	\$29.93	\$0.312	\$14.25
Laborers, all departments.....	7	167	43.5	99.7	7.5	45.0	57.9	78	12.27	27.06	.270	12.42
Seasoners.....	6	81	47.6	95.1	7.6	45.6	57.2	80	18.35	31.42	.354	16.21
Light upper.												
Glaziers.....	6	114	35.8	.....	6.0	35.8	51.0	70	15.40	.....	.422	15.40
Ironers.....	6	42	40.5	.....	6.7	40.5	49.1	82	12.58	.....	.314	12.58
Laborers, all departments.....	10	148	44.6	.....	7.4	44.6	48.6	92	13.47	.....	.300	13.47
Putters-out, machine.....	4	69	33.4	.....	5.6	33.4	48.9	68	10.54	.....	.313	10.54
Seasoners.....	7	243	40.2	.....	6.6	40.2	49.5	81	11.99	.....	.291	11.99
Sole.												
Laborers, all departments.....	4	61	46.3	95.1	7.6	45.6	48.0	95	17.22	36.58	.375	17.38
Total.....	23	989	40.8	98.1	6.9	41.4	52.1	79	13.40	29.17	.318	13.43

Paper and pulp.

MALES.											
<i>Paper.</i>											
Back tenders.....	81	757	53.0	102.1	8.7	52.2	50.8	102.8	\$26.88	\$53.76	\$0.516
Beater men.....	82	459	54.5	108.0	8.9	53.4	51.7	103.3	31.09	53.76	.551
Calender men.....	26	305	50.1	96.4	8.3	49.8	49.3	101.0	23.81	44.34	.504
Counters.....	15	43	52.4	92.2	8.4	50.4	50.0	100.8	24.02	40.68	.450
Cutter men.....	57	186	54.6	109.3	9.0	54.0	53.7	100.6	23.15	48.26	.428
											\$28.63
											29.44
											24.92
											22.66
											23.15

Enmellers.....	7	87	55.1	95.6	8.5	51.0	50.2	101.6	30.15	47.74	.526	26.83
Loftmen.....	7	65	48.1	.....	8.3	48.1	48.8	98.6	21.43	.....	.429	21.43
Machine tenders.....	81	702	53.4	112.0	8.9	53.4	50.9	104.9	36.60	76.49	.692	36.63
Packers.....	80	582	50.3	106.0	8.6	51.6	53.2	97.0	25.98	41.04	.427	24.93
Plater men.....	12	45	50.3	106.0	8.4	50.4	51.4	98.1	18.36	48.81	.460	23.30
Rag workers.....	19	84	51.1	108.3	8.6	51.6	54.1	95.4	18.36	38.69	.339	18.38
Size makers.....	40	33	55.6	134.9	9.2	55.2	54.0	102.2	24.42	60.36	.440	24.90
Third hands.....	70	617	52.8	99.2	8.6	51.6	50.9	101.4	23.36	45.66	.447	22.99
Trimmers.....	38	100	53.4	102.5	8.6	52.8	52.8	100.0	26.71	50.30	.500	26.25
Washermen.....	55	51.4	98.3	98.3	8.5	51.0	49.7	102.6	23.90	46.25	.473	23.64
Total.....	82	4,140	52.8	103.4	8.7	52.2	51.4	101.6	27.68	52.90	.512	27.13
<i>Pulp.</i>												
Acid makers.....	36	106	56.6	118.9	9.4	56.4	51.1	110.4	28.52	56.68	.500	28.12
Barkers.....	30	234	53.6	90.6	8.2	49.2	51.7	95.2	22.03	41.06	.424	20.95
Blow pitmen.....	33	125	53.7	108.4	8.7	52.2	50.0	104.4	23.36	40.46	.433	22.90
Chipper men.....	36	147	55.0	95.2	8.5	51.0	52.4	97.3	23.20	42.36	.431	21.77
Cooks.....	37	119	55.5	108.4	9.1	54.6	50.5	108.1	31.07	60.93	.535	30.51
Grinder men.....	29	555	52.1	93.3	8.3	49.8	52.6	84.7	24.14	44.80	.444	23.10
Pressmen.....	43	677	51.4	100.7	8.3	49.8	50.9	97.8	23.03	45.67	.448	22.40
Screenmen.....	32	180	52.6	111.2	8.8	52.8	49.7	106.2	22.59	50.79	.433	22.84
Splitter men.....	20	83	54.9	113.4	9.0	54.0	51.9	104.1	21.56	52.19	.433	22.52
Total.....	43	2,226	52.9	100.0	8.5	51.0	51.4	99.2	23.93	46.37	.449	23.17
Grand total.....	85	6,366	52.8	101.9	8.6	51.6	51.4	100.4	26.47	50.08	.490	25.78
<i>Paper.</i>												
Calendar girls.....	4	43	49.8	.....	8.3	49.8	51.3	97.1	15.09	.....	.303	15.09
Counters.....	35	199	48.7	100.5	8.1	48.6	52.1	93.3	14.72	27.87	.297	14.48
Laborers.....	58	1,165	47.7	92.9	7.9	47.4	51.5	92.0	13.10	25.11	.276	12.82
Sorters.....	21	557	49.3	90.2	8.0	48.0	52.0	92.3	13.70	23.42	.274	13.10
Total.....	64	1,964	48.2	92.9	8.0	48.0	51.7	92.9	13.44	24.75	.277	13.11

Pottery.

MALES.

Casters and pressers.....	15	106	46.8	88.9	7.5	45.0	53.0	84.9	\$33.61	\$54.97	\$0.658	\$29.45
Decorating kiln men.....	13	37	48.6	103.7	8.8	52.8	54.3	97.2	27.96	74.72	.651	34.57
Dippers.....	14	52	42.6	77.7	6.7	40.2	47.5	84.6	32.26	77.57	.943	36.28
Dish makers.....	15	46	44.1	88.6	7.4	44.4	52.8	84.1	33.07	57.27	.696	30.08
Gilders and liners.....	12	90	46.0	93.6	7.7	46.2	51.4	89.9	38.68	69.39	.774	36.33
Handlers.....	15	60	47.9	92.1	8.0	48.0	52.8	90.9	31.90	82.57	.817	37.69

TABLE 4.—AVERAGE HOURS WORKED AND AVERAGE EARNINGS MADE IN SPECIFIED INDUSTRIES IN 1919, BY SEX, OCCUPATION, AND PAY-ROLL PERIOD.—Concluded.

Pottery—Concluded.

Sex and occupation.	Number of establishments.	Number of employees.	Average hours actually worked—				Full-time hours per week.	Per cent of full time worked.	Average earnings actually made—			
			In weekly pay period.	In biweekly or semi-monthly pay period.	Per day.	Per week.			In weekly pay period.	In biweekly or semi-monthly pay period.	Per hour.	Per week.
MALES—concluded.												
Jiggers.....	15	198	45.5	79.6	6.9	41.4	52.3	79.2	\$34.59	\$60.31	\$0.775	\$31.65
Kiln placers.....	15	272	37.8	72.7	6.2	37.2	52.4	71.0	30.94	60.46	.830	30.54
Laborers.....	15	1,009	50.6	78.5	7.1	42.6	54.9	77.6	20.16	39.20	.479	19.86
Mold makers.....	15	37	50.7	97.0	8.2	49.2	53.0	92.8	41.14	82.03	.840	41.27
Packers.....	15	48	47.0	80.2	7.0	42.0	52.9	79.4	31.24	52.00	.665	27.64
Sagger makers.....	14	49	46.1	88.8	7.5	45.0	52.9	85.1	43.50	68.33	.822	37.02
Setters-out.....	15	53	38.6	78.8	6.5	39.0	52.7	74.0	40.71	85.19	1.087	41.85
Turners.....	15	85	43.8	81.6	7.0	42.0	52.7	79.7	31.51	67.09	.783	32.80
Total.....	15	2,142	47.2	81.1	7.1	42.6	53.6	79.5	26.60	54.03	.647	26.83
FEMALES.												
Gilders and liners.....	13	62	39.6	85.5	6.9	41.4	50.4	82.1	20.29	42.46	.509	20.85
Laborers.....	15	681	42.2	75.0	6.5	39.0	51.7	75.4	11.38	23.26	.300	11.54
Transfers.....	14	372	44.3	84.8	7.2	43.2	49.5	87.3	14.82	29.82	.342	14.86
Total.....	15	1,115	43.0	78.1	6.8	40.8	50.9	80.2	13.37	26.04	.326	13.17

Rubber.

[The branch of the industry in which each occupation is found is indicated as follows: F=footwear; H=hose; M=mechanical goods; and T=tires and tubes.]

MALES.												
Bead makers (T.).....	14	208	48.2	102.7	8.1	48.6	49.6	98	\$30.87	\$72.69	\$0.680	\$31.69
Belt makers (M.).....	4	39	49.7	92.0	8.2	49.2	52.7	93	24.07	38.00	.500	23.57
Bias cutter operators (T.).....	13	44	53.8	104.0	8.8	52.8	50.8	104	32.32	69.70	.630	32.49
Boot, shoe, and lumberman makers (F.).....	5	813	51.6	97.8	8.6	51.6	53.1	97	26.13	41.25	.507	26.13
Braiders (H.).....	5	43	50.7	97.8	8.4	50.4	51.9	97	22.81	41.25	.472	22.64

Builders or makers, hand (T.).....	12	400	44.4	107.7	7.8	46.8	51.3	91	35.27	64.55	733	33.43
Builders or makers, machine (T.).....	13	562	44.1	93.1	7.4	44.4	48.8	91	34.00	67.07	769	33.59
Calender men.....	23	318	53.0	101.7	8.7	52.2	51.9	101	30.35	56.03	607	30.74
Compounds.....	23	250	52.5	101.4	8.6	51.6	52.2	99	26.70	56.83	502	26.74
Cutters, machine (F., H.).....	10	142	49.7	110.2	8.3	49.8	53.5	93	26.61	52.08	550	26.23
Cutters and covers, hand (F., H.).....	12	386	54.0	103.1	9.0	54.0	52.8	102	30.29	53.02	537	30.04
Finishers and treaders (T.).....	14	1,057	43.5	95.9	7.3	43.8	48.9	90	32.06	63.36	732	32.00
Laborers and helpers (T.).....	13	4,057	47.4	104.3	8.0	48.0	50.5	95	54.43	54.43	548	25.58
Laborers and helpers (F., H., M.).....	15	2,657	55.6	101.5	8.8	52.8	53.0	100	21.09	42.00	395	20.85
Lathie men, buffers and cutters (T.).....	7	33	46.6	114.1	8.3	49.8	52.3	95	38.61	67.79	671	33.47
Lathie men, buffers and cutters (H., M.).....	4	40	56.1	105.1	8.3	49.8	54.0	92	23.01	50.57	472	23.29
Makers, hand (F., H., M.).....	7	81	49.9	95.0	8.0	48.0	52.9	91	24.97	47.74	509	24.05
Makers, machine (H.).....	7	36	41.9	96.6	7.2	43.2	52.9	80	19.78	47.79	475	20.54
Millmen.....	23	983	51.5	105.6	8.5	51.0	52.3	98	26.18	59.65	531	26.52
Operators, tubing machine (jacket and cover) (T.).....	8	37	49.7	108.0	8.3	49.8	50.6	98	29.93	65.75	611	29.93
Operators, tubing machine (jacket and cover) (H., M.).....	9	83	53.7	103.8	8.9	53.4	53.8	99	23.50	43.09	439	23.44
Ply cutters, tread cutters, and splicer preparers (T.).....	12	202	47.7	99.2	7.9	47.4	50.2	94	29.14	47.85	607	28.52
Refiners, screeners, and grinders.....	14	127	50.4	109.2	8.4	50.4	52.1	97	25.00	67.85	562	27.84
Tube rollers, wrappers, and strippers (T.).....	13	327	43.3	104.0	7.5	45.0	50.0	90	31.81	66.57	718	31.65
Tube rollers, wrappers, and strippers (F., H., M.).....	5	62	55.0	98.9	8.9	53.4	53.9	99	27.73	49.50	503	27.02
Vulcanizers (T.).....	13	1,108	48.6	91.9	8.0	48.0	48.4	99	34.00	84.82	734	34.45
Vulcanizers (F., H., M.).....	13	394	51.5	105.4	8.4	50.4	53.9	94	26.55	51.17	514	25.59
Wrappers, machine (T.).....	3	32	49.3	119.3	9.6	57.6	59.0	98	33.18	44.66	584	33.43
Wrappers, machine (F., H., M.).....	10	64	45.9	101.1	7.7	46.2	51.8	80	24.07	51.91	577	24.05
Total.....	23	14,613	49.8	102.8	8.2	49.2	51.1	96	27.04	56.90	563	27.02
FEMALES.												
Bead makers (T.).....	6	34	49.0	102.3	8.2	49.2	52.9	93	18.55	37.45	376	18.51
Bias-cutter operators (T.).....	2	12	50.4	.....	8.4	50.4	40.1	103	23.57	.....	472	23.57
Boot shoe, and lumberman makers (F.).....	5	1,316	44.1	.....	7.8	44.1	51.4	86	14.79	.....	333	14.79
Braiders (H.).....	5	84	44.1	85.0	7.3	43.8	51.0	83	13.84	.....	310	13.56
Builders or makers, hand (T.).....	4	84	47.7	94.9	7.9	47.4	48.8	97	24.90	39.50	512	24.03
Cutters, machine (F., H.).....	2	24	38.7	.....	6.4	38.7	49.1	73	9.06	.....	231	9.06
Finishers and treaders (T.).....	3	74	41.7	.....	0.9	41.7	49.1	85	21.26	.....	513	21.26
Fitters (stitching, quarter makers, etc.) (F.).....	3	209	43.5	.....	7.2	43.5	51.8	88	15.25	.....	338	15.25
Laborers and helpers (T.).....	11	300	46.5	98.5	7.8	46.5	51.0	92	17.78	.....	361	16.80
Laborers and helpers (F., M., H.).....	15	1,168	48.4	92.5	7.9	47.4	53.1	89	12.97	31.41	272	12.88
Ply cutters, tread cutters and splicer preparers (T.).....	5	31	46.5	.....	7.7	46.5	51.4	90	21.28	.....	457	21.28
Tube rollers, wrappers, and strippers (T.).....	5	40	43.2	108.7	7.4	44.4	49.2	90	20.31	50.36	465	20.31
Total.....	22	3,376	45.8	95.0	7.8	46.8	51.9	90	14.95	29.44	326	14.84

Wages and Hours of Labor in Denmark.

THE Danish statistical office has made a study of wages of industrial workers on the basis of material supplied by the Danish Employers' Association (*Dansk Arbejdsgiverforening*).¹

The data apply to the quarter ending September 27 and are calculated in the form of average weekly earnings. They cover 100,649 workers. Comparative figures are shown for the year 1914.

Briefly summarized the data are as follows:

AVERAGE HOURLY RATES OF WAGES IN DENMARK, SEPTEMBER, 1914 AND 1919.

[Computations into United States currency made on par value of crown, 26.8 cents.]

City, and sex and class of workers.	Number of workers (September, 1919).	Average hourly rates—		Per cent increase September, 1919, over September, 1914.
		Sep- tember, 1914.	Sep- tember, 1919.	
<i>Copenhagen.</i>				
Male workers:		<i>Cents.</i>	<i>Cents.</i>	
Skilled.....	23,242	18.0	58.5	225.0
Unskilled.....	13,398	12.7	50.3	296.1
Total males.....	36,640	16.3	54.5	234.4
Female workers.....	11,569	8.7	28.9	232.2
Total, both sexes.....	48,209	14.6	48.4	231.5
<i>Provinces.</i>				
Male workers:				
Skilled.....	22,001	14.7	49.2	234.7
Unskilled.....	23,565	10.9	41.6	281.7
Total males.....	45,566	12.9	45.2	250.4
Female workers.....	6,874	6.9	26.2	279.
Total, both sexes.....	52,440	12.0	42.7	255.8
<i>The Kingdom.</i>				
Male workers:				
Skilled.....	45,243	16.4	54.2	230.5
Unskilled.....	36,963	12.2	44.7	266.4
Total males.....	82,206	14.7	49.4	236.1
Female workers.....	18,443	7.9	27.9	253.2
Total, both sexes.....	100,649	13.5	45.5	237.0

Various laws limit the hours of labor of workers in Denmark.² These laws are the apprentice act, bakery workers' law, the general factory act, and quite recently the law on the 8-hour day in continuous industries. Recent agreements between employers and em-

¹ Statistiske efterretningen udgivet af det Statistiske departementet, 18 februar 1920.

² Beretning om de (Samvirkende Fagforbunds) Virksomhed, 1 April 1918-31 Marts 1919. Copenhagen, 1919, pp. 29, 30.

ployees have materially reduced the hours of labor. The following table shows the result of the agreement of 1919, covering the same group of workers as in 1918, between the National Federation of Trade Unions and the National Employers' Association:

NUMBER AND PER CENT OF EMPLOYEES WORKING EACH SPECIFIED NUMBER OF HOURS PER DAY.

Hours per day.	1918		1919	
	Number.	Per cent.	Number.	Per cent.
Under 8 hours.....	791	0.5	791	0.5
8 hours.....	8,452	4.8	17,343	9.9
8½ hours.....	8,891	5.0	98,013	55.9
9 hours.....	29,661	16.9	59,195	33.7
9½ hours.....	68,352	39.0		
10 hours.....	53,072	30.3		
Over 10 hours.....	6,123	3.5		
Total.....	175,342	100.0	175,342	100.0

The 10-hour day is a thing of the past in so far as the organized workers of Denmark are concerned. The 59,195 workers who in 1918 worked 10 or more hours per day now work only 9 hours. Only 8 hours are worked on Saturday. There have been no reductions in wages as a result of these agreements.

MINIMUM WAGE.

New Minimum-Wage Awards in Massachusetts and Washington.

Massachusetts.

THE division of minimum wage of the Massachusetts Department of Labor and Industries recently approved the determination of the wage board established to recommend minimum wage rates for women and girls employed in the manufacture of knit goods other than standard lines of hosiery and underwear, and issued a decree establishing the new rates, effective July 1, 1920.

These rates are as follows:

1. For experienced employees, not less than \$13.75 a week.
2. For all others, not less than \$8.50 a week.
3. An employee, irrespective of age, shall be deemed experienced who has been employed in the occupation for at least 40 weeks.
4. These rates are based on full-time work, by which is meant the full number of hours required by employers and permitted by the laws of the Commonwealth.

It is explained that the knit-goods occupation includes all branches of the knit-goods industry, with the exception of staple lines of hosiery and underwear, but that this exception shall not apply to lines used for athletic purposes nor to special lines such as bathing suits, tights, and infants' garments.

This decree is the third entered since the reorganization of the Department of Labor on December 1, 1919, and the fifteenth since the enactment of the minimum wage law of 1912.

To guide it in determining the minimum wages to be fixed, the board made an inquiry into the cost of living of a self-supporting girl in Massachusetts under present conditions, and found the total weekly budget to be \$15.30, distributed as follows:

Board and room.....	\$8.50
Clothing.....	3.25
Laundry.....	.50
Carfare.....	.75
Doctor and dentist.....	.30
Church.....	.10
Newspapers and magazines.....	.20

Vacation.....	\$0. 50
Recreation.....	. 40
Savings.....	. 20
Incidentals.....	. 30
Insurance.....	. 10
Self-improvement.....	. 20
Total.....	15. 30

Washington.

THE Industrial Welfare Commission of the State of Washington recently adopted the following resolution which had been approved by the Public Housekeeping Conference which met to recommend wages, hours, and standards of labor for employees in the different occupations of the public housekeeping industry. The provisions of this resolution become effective on June 2, 1920.

Be it resolved, That this Public Housekeeping Conference does hereby make the following recommendations to the Industrial Welfare Commission in reference to standards of labor demanded for the health and morals of women workers in the different occupations of the Public Housekeeping Industry throughout the State:

That no person, firm, association, or corporation shall employ any female over the age of 18 years in any occupation in the public housekeeping industry throughout the State at a weekly wage rate of less than \$18 or \$3 per day or 37½ cents per hour, such wage being the estimate of said conference of the minimum wage adequate to supply the necessary cost of living and to maintain them in health and comfort.

That no person, firm, association, or corporation shall employ any female over the age of 18 years in any occupation in the public housekeeping industry throughout the State more than six days in any one week.

That no person, firm, association, or corporation shall employ any female over the age of 18 years in any occupation in the public housekeeping industry throughout the State more than five hours without a rest period of at least one-half hour; that a schedule of hours be posted in all cases; that where a uniform be required it must be furnished and laundered by the employer; that when meals are furnished to employees the time used in eating may be deducted in arranging the schedule; that if room be furnished same must be properly heated and sanitary; that there must be separate toilets for women and a suitable room provided for change of clothing and for eating lunches; that women shall not be employed as "bell hops" nor serve as elevator operators after 12 o'clock at night; that when board is furnished \$1 per day may be deducted; and for room furnished \$2 per week may be deducted; that 25 cents may be deducted for breakfast, 35 cents for lunch, and 40 cents for dinner; that in every case there shall be a definite agreement as to whether board and room shall or shall not be furnished; that otherwise the straight wage scale shall prevail.

WOMEN IN INDUSTRY.

Plans for Improvement of Domestic Service.

IT WILL be easily conceded that it requires no country-wide statistical survey of domestic service to convince the public that housewives in general are confronted by a serious shortage in the domestic-labor supply. The situation has become so harassing that it seems likely to result in changes in ideals and methods of household management, in social conventions, and home and community activities. Even the exercise of the age-honored virtue of hospitality is being abridged. To the servantless housewife the entertainment of guests, involving the preparation of food and the washing of countless dishes, becomes a modified joy, raising the question of whether the rewards of a hostess counterbalance the caloric energy expended therefor.

An editorial in the *Journal of Home Economics*, December, 1919, voices a realization of the importance of meeting the household labor problem. After referring to the domestic service studies of the Y. W. C. A., to the New York experiment of the United States Employment Service in placing household assistants, to somewhat similar experiments in other cities, to Lady Londonderry's efforts at organizing domestic servants in England, and to the schemes for similar organization in this country, the editorial states that the American Home Economics Association, "whose work is definitely for the home, has not even a committee on household employment." The editor suggests that that association make some real contribution to the solution of the difficulty and concludes with this interrogation: "Is it not time that we helped either to adjust domestic service to the home, or else show the home how to be independent of it?"

Action Taken Toward Solution of Domestic Service Problem.

New York State College for Teachers.

THE Beta Chapter of the Omicron Nu¹ at the New York State College for Teachers has planned a series of studies and discussions on the "servant problem," covering—

The home or family unit, the social and economic relation to the community; growth of family and service.

Development of public service—what it means and involves; principles underlying service.

Can household service be put on a business basis? If so, what standards should be established?

¹ Honorary home economics sorority.

Physiological and ethical side of service.

Specialization in domestic service work—a place for it in vocational high schools.

A suggested course of study for the vocation.

National Housewives' League.

The dearth of domestic helpers is calling other organizations into energetic action. The National Housewives' League has recently appointed a national committee on household employment, the chairman of which is Mrs. Henry S. Patterson, who has tried the experiment of home assistants in her own household. The league is also being urged to establish in New York City a Bureau of Household Occupations.

Chicago Conference on Household Management.

On January 12, 1920, a conference on household management was held in Chicago under the auspices of the Chicago Woman's Club, the Woman's City Club, Chicago Housewives' League, and the Illinois Federation of Women's Clubs. "The future of the American home," "The Chicago household workers' point of view," "Part-time work," and "Mechanical aids in the home" were among the subjects discussed. Miss Eleanor Richardson, of the Y. W. C. A., gave a talk at this conference, declaring that if we are to get the better type of servant back into the home we shall have to "compete with business on terms of business." She gave a brief statement of the experiment being tried by the central branch of the Y. W. C. A. in New York City in placing domestic helpers on an eight-hour day basis with the whole of Sunday off and a wage of \$12 a week and up. She declared that these girls were given the same information about their prospective employers as were the girls going into industry. Miss Richardson expressed the belief that in Chicago, where the community spirit is strong, an agreement as to a fair and constructive standard for household work could be reached which would bring women back to domestic service. The regulation and systematizing of this service were advocated by Miss Richardson, who also recommended a democratic attitude toward young women in household employment and the raising of domestic work into the dignity of a profession.

Mrs. D. W. Redfield, of the department of home economics and pure food of the Illinois Federation of Women's Clubs, emphasized the need of making housework a profession not only for maids but also for mistresses. She declared that "the business of housekeeping and homemaking comes under three heads—food, clothing, and shelter. The physical work of the home, known as general housework, comes under the first of these, namely, food, and is covered by the business of cooking and cleaning. This is the common meeting ground for the 25,000,000 women 20 or more years of age, whether working in their own homes or in the homes of others." She was in

favor of opportunity being provided for every woman to graduate in general housework and to receive some degree, as R. H. (registered houseworker) or H. E. (household engineer). An authoritative body, she thought, should give examinations at different times of the year in various places, and suggested that the Federal Board for Vocational Education would be the logical agency to work out the scheme. Examinations could then be held in all States and should be available to every woman. The woman who through practical experience has learned the technique of general housework and secures 100 per cent as the result of an examination should be given her degree. Those who fail in some part of the examination should be allowed, after further preparation, possibly under a neighborhood domestic science teacher, another opportunity to pass. Diplomas or badges might be substituted for references.

Mrs. B. H. Badenoch, instructor in the American School of Home Economics, spoke to the conference on the subject of the servantless home, and began with the statement that the most vital point in the success of any woman in her home is her attitude toward her work, adding that as a rule women place too low a value on their work. Mrs. Badenoch's contention seems to be in line with the latest theories of the industrial experts on the relation of psychology to productivity. She gave the following counsel:

Plan what to do, do it, forget it, and recreate. In planning the work alternate standing, walking, and sitting tasks, and sit as much as possible. It is just as easy to sit while ironing, washing dishes, paring vegetables, or making a cake as it is to stand, and it uses much less energy. Seek to make each task as easy as possible, use the fewest motions possible, and then do it the same way each time; in other words, turn it over to habit, the great conservator of energy. Stop work before becoming too tired. Science tells us that one-half the rest will be needed for recuperation and twice the work can be accomplished by so doing. And most important of all, wear loose clothing and sensible shoes (when will women stop wearing their old high-heeled pumps for housework?). Use the back properly (the University of Cornell has a whole bulletin on this important subject) and put rhythm and spirit into the work. With the same form and spirit we can find as much health and exercise in housework as in a game of tennis or golf. Can't we?

According to Mrs. Badenoch the working hours of the home should be reduced to as near an eight-hour day as possible. She holds that household work for a few adults can be easily brought within an 8½-hour day, but this, she admits, becomes difficult in the case of a mother with two or more children. Such a mother would have to adhere strictly to the following fundamental rules to keep within the time limit:

1. Eliminate *all* unnecessary work.
2. Secure family cooperation.
3. Simplify the manner of living, using less form.
4. Study to shorten every operation connected with the upkeep of the home.
5. Work with a definite aim for each day. In other words, build a schedule.

Housekeepers' Alliance.

The Housekeepers' Alliance of Washington, D. C., is formulating plans for domestic service classes for both mistresses and maids at the community centers during the next school year. The organization has also established a placement bureau in the Franklin Public School. The following rules and recommendations have been drawn up for the Alliance's placement office:

1. An employee who leaves an employer without a week's notice shall be placed on probation, given another trial, and if she fails again her name will be stricken from the list of the Housekeepers' Alliance placement office.

2. Insolence shall not be tolerated and shall be considered a cause for dismissal at the discretion of the employer. At the same time employers are urged to safeguard themselves against insolence by observing the Biblical injunction "Provoke not to wrath."

3. Long and faithful service on the part of an employee it is recommended shall be rewarded by an increase of wages, and a good record card of the same be filed at the Housekeepers' Alliance placement office.

4. Employers are urged not to lay too much stress upon ill temper on the part of employees, since experience has proved that a person may live harmoniously with one employer when she has found it impossible to live with another.

5. A thief shall never be directed to employment by the Housekeepers' Alliance placement office. Reports from employers on the status of such cases should be promptly reported to the secretary, but with great care not to accuse wrongfully.

6. A classified list shall be an important part of the secretary's record of the Housekeepers' Alliance placement office, and be a guide for wage adjustment.

7. If an applicant is sent by the Housekeepers' Alliance placement secretary for employment and finds that the opportunity has previously been closed, no notice of this fact having been made to the office, it is requested that car fare be refunded to the applicant.

8. An employer who is a member of the Housekeepers' Alliance shall receive one service a month from the office provided she has secured one satisfactory employee.

9. Adjustments of all grievances shall be made at the Housekeepers' Alliance placement office in the interest of better understanding.

10. Compensation at the present time must be left between employer and employee with the understanding that members of the Housekeepers' Alliance will make every effort to standardize labor and keep down prices.

Forty dollars per month is recommended as a fair price for cooks, that is, those who can prepare food economically and in some accord with the requirements of health. To receive more than \$40, the applicant should have a certificate as evidence that she is qualified by instruction and experience to do fancy cooking.

Thirty-five dollars per month is recommended for a general houseworker.

Thirty dollars per month is recommended as the wage for skilled chambermaids and waitresses.

Three dollars with dinner and \$4 without dinner is suggested as the maximum wage for an evening waiter.

Part-time assistants paid for by the hour are recommended as an aid to solving the domestic service problem, since by this means one employee can serve several families, doing the heavy work in each household and being available at odd times as needed.

Proficiency in a general houseworker who is obliged to combine the positions of cook, housemaid, and waitress must be recognized in this scale of wages.

Providence Housewives' League.

The bureau of household occupations of the Providence (Rhode Island) Housewives' League is an organization for the placing of home assistants.² Reporting on the work of that office for the last year the president, Mrs. Howard K. Hilton, writes as follows:

The bureau has prospered in every way and we have been able to do much educational work among both employer and employee. We are constantly facing new problems, but feel that the bureau has come to stay; and a number of other cities have already copied our idea. We are now to form an association of representatives from these bureaus to meet together for conference and discussion. During the month of February we supplied over 10,000 hours of service and we are practically self-supporting, our idea being that the bureau shall not be a money-making enterprise nor a philanthropical one, but educational.

Domestic Workers' Unions.

Domestic employees themselves are also taking steps toward bettering their working conditions. This is indicated by the fact that the American Federation of Labor reports 10 unions of such workers in the following cities: Los Angeles and San Diego, Calif.; Brunswick, Ga.; Chicago and Glencoe, Ill.; New Orleans, La.; Beaver Valley, Pa.; and Denison, Harrisburg, and Houston, Tex.

The secretary of the Hotel and Restaurant Employees of the International Alliance and Bar Tenders' International League of America reports that in August, 1919, that association established three domestic workers' unions—one in Mobile, Ala., another at Fort Worth, Tex., and another at Lawton, Okla. Last October a union of this character was started in Tulsa, Okla., which has made better progress than the other three. In March, 1920, a charter was issued to a domestic workers' union in Richmond, Va.

Conclusion.

IT IS obvious that recalcitrant domestic workers have forced housewives into a more scientific consideration of household problems. Facing the alternative of doing the domestic work themselves or paying a price for it they never paid before and at the same time granting so-called privileges they never granted before, housewives are weighing in an unwonted manner the relative values of household tasks. This will undoubtedly make for higher standards in home economics.

² See "Efforts to standardize the working day for domestic service," MONTHLY LABOR REVIEW, August 1919, p. 206.

VOCATIONAL TRAINING.

Part-time Instruction.¹

THAT the development of part-time and continuation classes steadily progresses is evident from the reports which come in month by month from the various State educational authorities.

The Iowa State Board for Vocational Education, in addition to the part-time classes for painters and machinists mentioned in the April number of the MONTHLY LABOR REVIEW, is conducting part-time dull-season courses in agriculture in four counties at 19 different centers. The classes are open to persons over 14 years of age who are engaged in farming and who can not take advantage of the regular vocational agricultural courses. They are in session 5 days a week for 10 weeks.

The instruction, which is adapted to local conditions as well as to the special individual needs of the pupils, comprises both classroom instruction and laboratory instruction. One-fourth of the time given to class instruction is devoted to farm crops, one-fourth to animal husbandry, one-fourth to farm shop, tractors, and farm engineering, and one-fourth to arithmetic, bills, letters, and records.

Application of the classroom instruction to actual farm conditions is secured through the personal work of the organizer for the county who is hired for 12 months and who in addition to his duties as organizer has the follow-up work in charge. After the classes have closed he spends his entire time in assisting individual members of the class in the solution of problems peculiar to their own farms.

The State is at present employing four organizers and a number of instructors, all chosen because of special fitness, by reason of training and experience, for this work. Some of them are practical farmers holding degrees from agricultural colleges, some are graduates of liberal arts colleges, who combine practice in farming with experience in teaching, while a few are seniors from agricultural colleges, who have also had agricultural experience.

The county provides each class with \$60 worth of books and charts, and also samples of grains, salts, etc.; the State library commission loans to each center 45 books, most of which relate to the subject

¹ The data on which this article is based were obtained from the Vocational Summary (Washington), March, 1920, p. 194.

studied, and the United States Department of Agriculture furnishes 200 bulletins dealing with various phases of agriculture.

The extent of the movement thus far may be seen in the fact that the training now being given will be directly applied, through the farms represented by the members of the classes, to from 30,000 to 35,000 acres of land now under cultivation throughout the State.

Another example of a part-time school equally as significant but of an entirely different character is that conducted by one of the packing companies of the Chicago stockyards for the boys and girls of its office force. The school has the approval of the State educational authorities and is in part at least maintained by Federal funds granted under the terms of the Federal Vocational Act. The Chicago Board of Education, which is collaborating with the company in this educational work for its employees, provides two high school teachers to take charge of the instruction given. Rooms, equipment, and supplies are furnished by the company.

All office employees between 14 and 18 years of age, and these number about 300 boys and girls, are required to attend the school eight hours a week on company time. About 60 per cent of these pupils are under 16 years of age, and as boys constitute the greater part of this percentage the courses given seem to be especially adapted to them.

The instruction includes a thorough training in problems relating to the packing industry as well as in English, spelling, business correspondence, arithmetic, rapid calculation, commercial geography, civics, and hygiene. Girls under 18 years of age are taught typewriting and comptometer operation. Girls who have had previous training in stenography but lack experience are given a five months' finishing course in English and office practice and at the same time are employed as stenographers by the company. All instruction is made as concrete as possible, the use of textbooks having been practically abolished.

Classes of a similar character have been organized in three other plants, and joint meetings of the teachers once a week promote cooperation and provide a means for the exchange of methods, ideas, and materials, all of which is proving of great value to those engaged in the movement.

The effort which the committee on education of the New York State Federation of Labor is making to bring trade apprenticeship within the scope of the recently enacted part-time school law of New York State, through definite apprenticeship agreements in each trade, is indicative of the attitude of a strong labor organization toward the possibilities of the part-time school.

The proposed agreement as outlined by the committee follows:

*Agreement between Master ——— Association and ——— Union
Covering the Education of Apprentices.*

1. The parties to this agreement hereby pledge themselves to cooperate with the public-school authorities to foster the education and vocational training of the apprentices in the ——— trade to the end that each apprentice shall become a thorough mechanic, with the requisite knowledge of the science and physics of the trade, instruction in mechanical drawing, the mathematics of the trade, the manipulation of tools, and the mechanical processes required for full mastery of the trade. Attention shall also be given to the study of civics, history of the industry, Americanization, and such other subjects as seem proper to develop the technical, moral, and patriotic standards that make for good citizenship and sturdy manhood.

2. Apprentices must have reached the age of 16 years and passed the eighth grade in school before entering the trade. Preference shall be given to boys who have attended ——— trade classes in the public vocational schools. Apprenticeship to cover a period of four years.

3. The ——— Employers' Association agrees to allow apprentices four hours off each week with pay to attend a continuation school during the school term.

4. The ——— Union will withhold membership in the union from any apprentice failing to attend such continuation school.

5. Attendance shall be for the full term of four years. (Subject to approval of the school authorities for apprentices in their eighteenth, nineteenth, and twentieth years.)

6. The parties to this agreement shall each nominate two of their members as members of an advisory board to be approved by the board of education. This advisory board shall counsel and advise: (a) To employ competent teachers; (b) to provide proper courses of study; (c) to purchase or acquire sites and grounds and to purchase, lease, acquire, or construct, and to repair suitable shops or buildings and to properly equip the same; (d) to purchase necessary machinery, tools, apparatus, and supplies.

7. One of each of the representatives on the advisory board of the parties to this agreement, together with a representative of the teaching staff of the continuation school, shall constitute an examining board, whose duty it shall be to pass on the fitness of apprentices to continue in the trade.

8. Examination shall be held at the end of each five-month period of the school term. Apprentices not showing progress consistent with the standards set by the school and the trade can be discharged as not having the qualifications necessary for competency in the trade. Additional attendance at an evening school can be recommended.

9. Apprentices completing the full four years' course shall receive a certificate signed by the presidents of the organizations, parties to this agreement, and the examining board, stating that the apprentice is competent to begin work as a journeyman.

10. Apprentices temporarily out of regular employment shall attend school not less than 20 hours per week.

Report on Apprenticeship in the Building Industry, Great Britain.

AT THE quarterly meeting of the industrial council for the building industry (Building Trades Parliament) held at York (England) on November 25, 1919, a report was submitted by the education committee subcommittee appointed to consider the question of apprenticeship of boys to the various trades within the industry. This report is interesting in that the subject matter

concerns in a general way many different industries and is one compelling the attention of employers and employees.

There are four general aspects of the subject treated: (1) Preparation for industry, the committee outlining its criticisms of the educational system in England as at present conducted, and submitting recommendations for its amendment; (2) the threshold of industry, the committee considering the matter of the selection of a life occupation with special reference to the building trades; (3) training in industry, the committee considering problems existing inside and outside the workshop and suggesting amendments to the "haphazard methods which have prevailed in the past" in order that "the ideal and supremacy of craftsmanship" may be realized and attained; and (4) post-apprenticeship period, the committee dealing "with the position in the industry of the youth who has completed the period of training required to qualify as a journeyman in his trade."

While the committee does not regard training for an industrial, commercial, or professional occupation as being the primary duty of the schools, it suggests that the fact that the average boy has, subsequent to his school career, to earn a living, demands an examination of the educational system from this point of view. It points out some of the defects of the present system and recommends: (1) Elementary schools to develop "the intelligence, imagination, and morale of the scholars without any particular bias, be it commercial or industrial"; (2) central or higher grade schools for "special training of a commercial, industrial, technical, or more advanced 'general' character"; (3) technical schools for boys who show the necessary abilities and disposition to receive the more advanced courses in the technicalities of a trade; (4) secondary schools for those who desire to proceed with the higher branches of "pure education"; (5) universities to offer higher training in any industry which a boy may select. In this connection some suggestions are made as to the form the curriculum should take. The report further recommends that scholarships and other forms of maintenance allowances should be payable by the State in respect of those youths who by their attainments have qualified to remain in full-time attendance at school beyond the age of 14 years.

The committee regards it as very important that a boy should be rightly directed in the choice of a trade or occupation at the time when he passes from school life into the wider field of industry and begins to earn money for himself.

He is passing from the period of discipline and restraint into the comparative freedom of industry; the physical and temperamental changes and characteristics of adolescence are powerful factors, and the idea of independence due to his capacity to earn a wage makes careful supervision necessary. Too early a conception of having reached the stage of manhood may do irretrievable harm.

Reference is made to the juvenile departments of the employment exchanges where employers and prospective employees may be brought together, but the committee believes that "the present methods leave much to be desired." There have been established in connection with these employment exchanges juvenile advisory committees, or choice-of-employment committees, to assist the boys in choosing a suitable occupation and to ascertain the needs of industry and register vacancies that may be available, etc. The committee commends this plan and recommends that it be extended; also that the associations of employers and of workpeople in the building industry be represented on the committees and that each juvenile advisory committee have a building trades apprenticeship subcommittee with direct representation of employers and operatives from each craft in the industry.

Functions of Apprenticeship Subcommittee.

THE committee suggests the following as the functions of this subcommittee, which may be made applicable to other industries:

1. To arrange for addresses to the boys in the schools upon the possibilities, etc., of the trades within the industry, i. e., to stimulate the interest of boys for craftsmanship. Those boys in a group of schools who are about to leave could be brought together in one center for this purpose.

2. To interview (with their parents) the boys who desire to enter a trade within the industry. The committee would have at their disposal full information in regard to (a) the scholastic attainments of the boy, particularly in respect of the inclination he has shown toward manipulative art during his school career; (b) his health record and physical development; and (c) his temperamental qualities, and any special characteristics that may have been observed. The committee will thus be able to advise which (if any) trade within the industry would be most likely to suit the boy.

3. To recommend suitable boys to employers who have the right kind of vacancy.

4. To prepare lists of employers who have the necessary facilities for training in a given trade. We regard this selection of the employer as equally important as the selection of the youth, as it will be admitted that not all employers have the necessary faculty or facilities for training the future craftsman.

5. To insure, by means of visits, regular reports, and occasional interviews that the youth is receiving the right kind of training, both in the workshop and in the technical institution, during his period of apprenticeship. Friendly supervision of this nature will indicate to the lad that there is some one interested in his efficiency, and will have a good moral as well as industrial value.

6. To advise the local education authority in regard to the equipment, selection of instructors, curriculum, etc., in the technical institution. This should conduce to efficiency of instruction and the right relationship between education and industry. This feature will be particularly important in the continuation schools to be established under the new education act.

7. To provide for the transfer of an apprentice from one employer to another, where such transfer is desirable, to enable the youth to receive as much variety of training as possible.

8. To consider and provide for the position of those youths in the industry who can not become craftsmen, but for whom continuity of employment in another capacity may be available.

9. To encourage advanced training in suitable cases where youths show the capacity to take up later posts of responsibility in the industry.

10. To promote the physical, social, and moral well-being of the youths by working in conjunction with boys' clubs, etc.

In considering the subject of training in industry the committee directs attention to the fact that the problem "is concerned with all grades of the working boy, and is not confined to the task of teaching the boy the use of tools or the special duties of his occupation; it also has regard to the health and general development of the youth."

The employer must recognize that he is under an obligation either to teach the youth, or to see that he is taught the trade, and that adequate facilities are available for such purpose. The operative, on the other hand, has need to regard the youth as the future fellow-craftsman whose training in a large measure depends upon the spirit of cooperation manifested in the workshop. It is not the function of, nor possible for, the operative to create in the youth an aptitude for the trade; it is, however, within his sphere to give the boy such assistance and encouragement as will enable him to master the difficulties of the craft.

Other problems inside the workshop relate to the determination of the number of entrants to meet the requirements of industry and its expansion, the method of selection, the age of admission, the length of apprenticeship, the question of promotion, advancement, etc., and the health of the boys in the factory.

That the life of the boy outside the workshop has a considerable effect on his industrial efficiency is generally recognized, and the problem of enabling youths to spend their leisure time judiciously and advantageously must be considered, in the opinion of the committee. There should be facilities for continuing education outside working hours and it is very important that recreational facilities also be provided.

The committee cautions against regarding the completion of apprenticeship as the completion of training in the chosen career. The university courses should be made readily available to the boy who desires to proceed to higher instruction. The boy who shows special aptitude should be given an opportunity to develop further and to qualify for the better positions in industry.

The committee proposes, should its recommendations be approved by the building trades council, to develop a model scheme of apprenticeship to cover workshop and institutional training to serve as a basis for each trade and area; to get into touch with the local authorities in order to establish the right relationship between education and industry, both national and local; and to formulate suggestions for the improvement generally of the position of all youths in the industry.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries in March, 1920.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in March, 1920, from representative establishments in 13 industries. (The figures for March, 1920, when compared with those from identical establishments for March, 1919, show increases in the number of people employed in 11 industries and decreases in 2.) The largest increases—93.6, 55.4, 46.2 and 37.9 per cent—appear in woolen, men's ready-made clothing, cotton finishing and automobile manufacturing, respectively, while respective decreases of 12.6 and 8.2 per cent are shown in car building and repairing and cigar manufacturing.

All industries report increases in the amount of the pay roll for March, 1920, as compared with March, 1919. The largest increases—183.4—and 163.8 per cent—appear in woolen and men's ready-made clothing, while cotton finishing, cotton manufacturing, and hosiery and underwear show respective increases of 90.4, 70.3, and 69.8 per cent.

The large increase in the volume of employment in March, 1920, when compared with March, 1919, is mostly due to improved industrial conditions and to a revival of business activities following the cancellation of Government contracts during the winter and spring of last year.)

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH, 1919,
AND MARCH, 1920.

Industry	Estab- lish- ments report- ing for March, both years.	Period of pay roll.	Number on pay roll in March.			Amount of pay roll in March.		
			1919	1920	Per cent of increase (+) or decrease (-).	1919	1920	Per cent of increase (+) or decrease (-).
Automobile manufacturing.	38	1 week..	91,668	126,434	+37.9	\$2,641,858	\$4,321,986	+ 63.6
Boots and shoes.....	70	...do....	58,392	63,710	+ 9.1	1,172,589	1,554,632	+ 32.6
Car building and repairing..	51	½ month..	55,501	48,535	-12.6	2,988,009	3,070,279	+ 2.7
Cigar manufacturing.....	56	1 week..	18,233	16,746	- 8.2	296,350	367,955	+ 24.2
Men's ready-made clothing..	49	...do....	23,666	36,770	+55.4	491,578	1,304,810	+163.8
Cotton finishing.....	16	...do....	8,758	12,808	+46.2	155,615	296,249	+ 90.4
Cotton manufacturing.....	52	...do....	45,973	53,318	+16.0	652,577	1,111,039	+ 70.3
Hosiery and underwear.....	65	...do....	28,495	34,302	+20.4	402,079	682,915	+ 69.8
Iron and steel.....	111	½ month..	160,467	170,963	+ 6.5	10,525,648	13,206,450	+ 25.5
Leather manufacturing.....	33	1 week..	15,793	17,483	+10.7	348,915	462,669	+ 32.6
Paper making.....	49	...do....	23,976	26,625	+11.0	527,995	724,623	+ 37.2
Silk.....	53	2 weeks..	15,188	16,750	+10.3	522,070	784,409	+ 50.3
Woolen.....	50	1 week..	24,986	48,361	+93.6	425,415	1,205,465	+183.4

In comparing the reports of the same industries for March, 1920, with those for February, 1920, 11 industries show an increase in the number of persons on the pay roll, and 2 a decrease. Increases of 5.6, 4.5, and 2.2 per cent are shown in men's ready-made clothing, paper making, and woolen, respectively. Both automobile manufacturing and silk show a decrease of 0.7 per cent.

When compared with February, 1920, the pay rolls in March, 1920, show increases in all of the 13 industries. The greatest increases are 11.6 per cent in men's ready-made clothing; 10.4 per cent in cigar manufacturing; 9.3 per cent in hosiery and underwear; and 8.3 per cent in car building and repairing.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN FEBRUARY AND MARCH, 1920.

Industry.	Establishments reporting for February and March.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			February, 1920.	March, 1920.	Per cent of increase (+) or decrease (-).	February, 1920.	March, 1920.	Per cent of increase (+) or decrease (-).
Automobile manufacturing.	38	1 week..	107,336	106,577	-0.7	\$3,447,931	\$3,671,850	+ 6.5
Boots and shoes.	68	do.	62,240	62,925	+1.1	1,442,554	1,538,664	+ 6.7
Car building and repairing.	51	½ month	48,276	48,535	+ .5	2,833,971	3,070,279	+ 8.3
Cigar manufacturing.	57	1 week..	16,717	16,941	+1.3	335,068	369,855	+10.4
Men's ready-made clothing.	49	do.	32,534	34,346	+5.6	1,081,344	1,207,016	+11.6
Cotton finishing.	16	do.	12,787	12,808	+ .2	286,824	296,249	+ 3.3
Cotton manufacturing.	62	do.	54,193	54,977	+1.4	1,117,429	1,154,540	+ 3.3
Hosiery and underwear.	63	do.	33,511	33,741	+ .7	614,687	671,751	+ 9.3
Iron and steel.	107	½ month	163,810	166,732	+1.8	12,075,932	12,887,959	+ 6.7
Leather manufacturing.	31	1 week..	17,228	17,335	+ .6	450,815	458,902	+ 1.8
Paper making.	53	do.	25,487	26,625	+4.5	679,368	724,623	+ 6.7
Silk.	49	2 weeks.	16,875	16,750	- .7	744,513	784,909	+ 5.4
Woolen.	50	1 week..	44,703	45,696	+2.2	1,120,901	1,147,555	+ 2.4

In addition to the data presented in the above tables as to the number of employees on the pay roll, 95 plants in the iron and steel industry reported 138,342 employees as actually working on the last full day of the pay period reported for March, 1920, as against 132,672 for the reported pay-roll period in March, 1919—an increase of 4.3 per cent. Figures given by 94 establishments in the iron and steel industry for March and February, 1920, show that 135,544 employees were actually working on the last full day of the pay period reported for in March, 1920, as against 132,567 for the period in February, 1920—an increase of 2.2 per cent.

Changes in Wage Rates.

IN 12 of the 13 industries there were establishments reporting increases in wage rates during the period February 15 to March 15, 1920, while a firm in one of these industries reported a decrease. A number of firms did not answer the inquiry relating to wage changes,

but in such cases it is probably safe to assume that no changes were made.

Automobile manufacturing.—Approximately 10 per cent of the employees in one firm received an increase of approximately 12 per cent. One establishment gave an increase of 8.3 per cent to 12 per cent of the employees, while 16 per cent of the men in another plant were increased $6\frac{1}{2}$ per cent. An increase of 3.7 per cent, affecting 44.4 per cent of the employees, was reported by one establishment. All of the employees in one concern were granted an increase of 3 per cent and 10 per cent of the force in another plant received an increase of 2 per cent.

Boots and shoes.—Two establishments reported a 15 per cent increase, affecting 85 per cent of the employees in one factory and 7 per cent of the employees in the other plant. An increase of $13\frac{1}{4}$ per cent, affecting $6\frac{3}{4}$ per cent of the men, was reported by one concern. One firm gave an increase of about 10 per cent to about 5 per cent of the force, and an increase of 5 per cent, affecting $6\frac{1}{4}$ per cent of the employees, was reported by another establishment.

Car building and repairing.—Two establishments reported an increase of 10 per cent, affecting 89 per cent of the employees in one firm and 10 per cent of the men in the other concern. One firm gave an increase of 5 per cent to 25 per cent of the foundry men and an increase of 5 cents per hour to the car department hourly men. Forty per cent of the men in one establishment received an increase, but the amount of the increase was not given.

Cigar manufacturing.—One establishment granted an increase of 13.6 per cent to 65 per cent of the employees, while 40 per cent of the men in another factory received an increase of 12 per cent. Thirty per cent of the force in one concern were given an increase of 10 per cent. One firm gave an increase of 90 cents per 1,000 to rollers and 60 cents per 1,000 to bunch makers.

Men's ready-made clothing.—The entire force in one establishment received an increase of about 15 per cent and all the employees in another shop were given an average increase of \$5 a week. One concern granted an increase to 25 per cent of the men but failed to give the amount of the increase.

Cotton finishing.—Ten per cent of the employees in one establishment received an increase of 16 per cent.

Cotton manufacturing.—All of the employees in one firm were granted an increase of 10 per cent while the entire force in another plant received an increase of 8 per cent. One establishment gave an increase of $7\frac{1}{2}$ per cent to all the men and the entire force of one concern were given a 5 per cent increase. Two firms reported an increase of about 5 per cent, affecting all of the men in one factory and 90 per

cent of the men in the other establishment. One firm reported decreases ranging from 5 to 15 per cent, affecting 8 per cent of the employees.

Hosiery and underwear.—One establishment granted an increase of 25 per cent to 3 per cent of the employees. All of the men in one mill were given a 10 per cent increase and another firm reported an increase in the rates of wages but gave no further data.

Iron and steel.—One plant reported increases ranging from 10 to 40 per cent, affecting 72.6 per cent of the employees. Six establishments granted an increase of 10 per cent, which affected all of the employees in four of the plants, 34 per cent of the force in the fifth mill, while the sixth firm did not state the number of employees affected. Four establishments granted the common labor an increase of 10 per cent, affecting 30 per cent of the employees in two plants, 15 per cent in the third mill, and 12 per cent in the fourth firm. Five plants gave an increase of 10 per cent to the common labor, or 10 per cent of the employees, and an increase of 6.8 per cent to the puddle-mill men, or 80 per cent of the force; while another concern that also gave an increase of 10 per cent to the common labor, gave an increase of 10 per cent to the puddle-mill men, which constituted 70 per cent of the employees in that establishment. One plant granted the common labor, or 5 per cent of the employees, an increase of 10 per cent. Four establishments reported an increase of approximately 10 per cent, affecting the entire force in three firms and 88 per cent of the employees in the fourth concern. With the exception of the clerical force, all employees in one firm received increases ranging from 2½ cents to 17½ cents per hour. All the employees in one plant received increases ranging from 6 to 8 per cent, while the entire force in another mill were granted increases ranging from 5 to 8 per cent. Three firms gave an increase of 7½ per cent, affecting 60 per cent of the force, about 20 per cent of the employees, and the bar department, respectively, and the third concern also gave an increase of 9 per cent to the men in the sheet department. One-half of the force in one establishment was given an increase of 7 per cent. One concern granted an increase of 6.8 per cent to 75 per cent of the employees, while another plant gave an increase of 6.8 per cent to the puddle-mill tonnage men, 5 per cent to the finishing-mill tonnage men, and 14 per cent to the remainder of the employees. Three establishments reported a 6 per cent increase, affecting 60 per cent of the employees in the first mill, 50 per cent of the men in the second concern, and 33½ per cent of the force in the other plant. One establishment gave an increase of about 5 per cent to all employees, while another firm reported an increase of 2½ cents per hour but made no further statement.

Leather manufacturing.—One establishment granted increases of $4\frac{1}{2}$, $7\frac{3}{4}$, and $12\frac{1}{2}$ per cent, affecting 20, 28, and 2 per cent of the employees, respectively. One firm gave a 10 per cent increase to all earning less than \$5 per day and a 5 per cent increase to the remainder of the force. Sixty-five per cent of the employees in one concern received an increase of 7 per cent, while 20 per cent of the men in another concern were given an increase of 6 per cent. Approximately 4 per cent of the force in one factory received an increase of about 4 per cent.

Paper making.—One establishment reported an increase of 20.6 per cent, affecting 13.8 per cent of the employees, while the entire force in two mills received an increase of $12\frac{1}{2}$ per cent. Three concerns granted an increase of 10 per cent, affecting all the employees in two plants and about 8 per cent of the men in the other establishment. One mill gave an increase of 8.7 per cent to 34.3 per cent of the force. About 20 per cent of the employees in one establishment were given an increase of about $6\frac{1}{2}$ per cent and another plant reported an increase but made no further statement.

Silk.—Two firms gave an increase of 10 per cent, affecting 60 per cent of the employees in the first establishment and 40 per cent of the force in the other mill. Six per cent of the men in one concern received an increase of 9 per cent, while another firm granted an increase of 8 per cent, affecting 75 per cent of the employees. One establishment gave 40 per cent of the force a wage-rate increase of 7 per cent.

Present Scope and Activities of the Federal Employment Service.^a

THE Employment Service of the Department of Labor exists by reason of administrative arrangement by the Secretary of Labor. The specific provision of the act creating the department in 1913 states that one of the purposes of it is that of "advancing the opportunities of the wage earners for profitable employment.)" Prior to that date, that is, since 1907, the service of placement through the Division of Information of the Bureau of Immigration was limited to "promoting a beneficial distribution of aliens admitted to the United States." The division was looked upon merely as an agency for the better distribution of immigrant labor. With the creation of the Department of Labor in 1913 its activities were expanded into those of a National employment service. The coun-

^a For a comparative account of the British and the United States employment systems, see the MONTHLY LABOR REVIEW for August, 1919, pp. 144-156.

try was divided into eight principal zones, with head offices in each district.

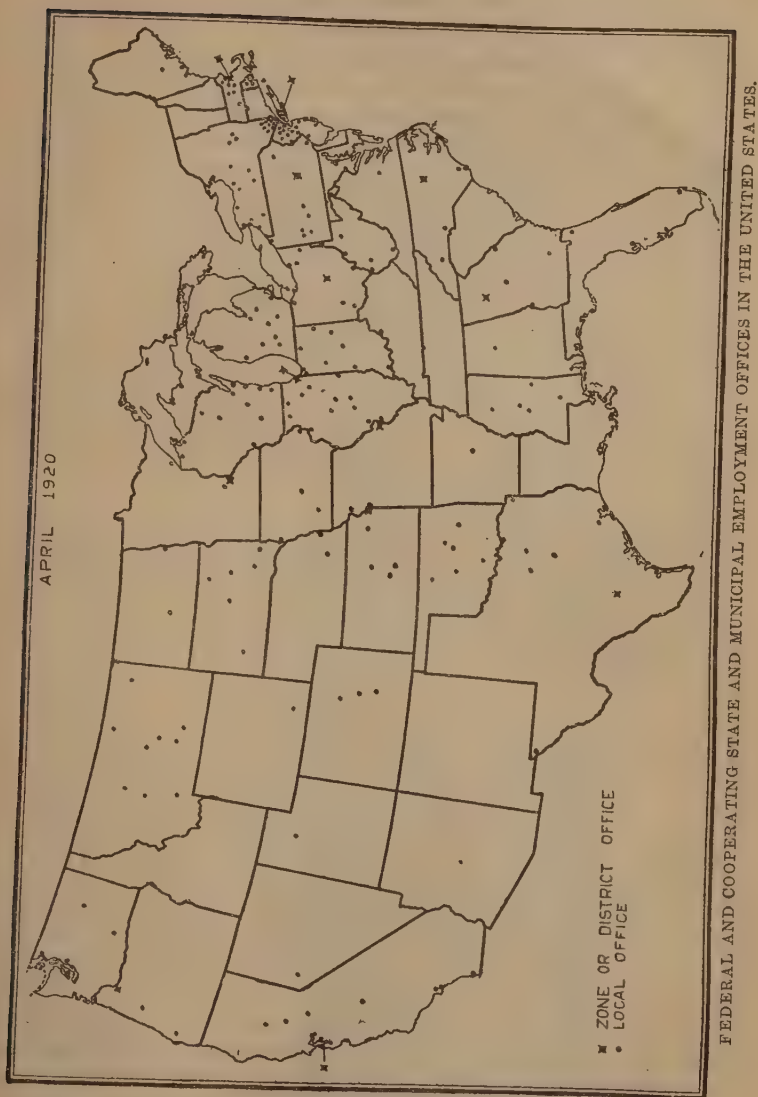
During the war the service greatly expanded under war-time Executive orders and with the aid of liberal appropriations. On October 6, 1917, six months after the United States entered as a belligerent into the World War, Congress appropriated \$250,000 for the service. Later the President allotted \$875,000 to the Department of Labor to be applied to the work of labor distribution. And for the fiscal year ending June 30, 1919, Congress originally made a liberal appropriation of \$5,500,000 and followed it by a deficiency allowance of \$272,000. During that period the service was in absolute control of the distribution of all labor of the country needed in the prosecution of the war. The recruiting activities of other agencies were restricted, if not entirely prohibited, and all the work of supplying labor was centered in the Federal Service, which had under its direction about 950 employment offices.

In 1919, following the termination of the war and a gradual reduction in scope and influence of the service, bills were introduced in both Houses of Congress for the continuance of the work and for placing it on a permanent basis. This was the purpose of House bill 4305 (66th Cong., 1st sess.), introduced May 31, 1919, by the Committee on Labor. Senate bill 1442, introduced June 6, 1919, was identical with the House bill, and was introduced by the Committee on Education and Labor. Senate bill 688 was introduced by Senator Robinson on May 23, 1919, and embodied the provisions of a draft bill drawn by a conference on unemployment which had been held April 23-25, 1919, at the request of the Secretary of Labor, and consisting of representatives chosen by the various State governors and of delegates from the United States Chamber of Commerce, the American Federation of Labor, and the directors and officials of the Employment Service. Joint sessions were held and extensive hearings were conducted on these bills.¹

The purpose of this pending legislation is to bring the State and municipal employment agencies into more effective cooperation with the Federal service by means of subsidies to the several States to encourage them to establish and maintain, according to standards laid down by the central Federal office, agencies for the placement of workers. The bills provide that the Federal Government shall contribute to each State an amount equal to the amount contributed by the State itself.

Thus far none of these bills has come to a vote in either house of Congress, and, coupled with a limited appropriation barely sufficient to maintain the Washington organization as little more than a clear-

¹ National employment system. Hearings before the Joint Committee on Labor, Congress of the United States, 66th Cong., 1st sess., parts 1, 2. Washington, 1919. 715 pp.



ing house, the service has been compelled to play a very limited part in the placement of labor since the signing of the armistice. At the present time the active works of placement is done by the public employment offices of the States and cities, while the Federal service receives and tabulates the activities of the local offices which may desire to continue cooperating with the central organization in addition to coordinating and stimulating the activities of the States. The sundry civil bill for the fiscal year 1920 carried an appropriation of \$400,000 for the service. At the time it was hoped that the bills establishing a permanent service by law would be enacted by the end of 1919; hence it was proposed to spend this \$400,000 within the five months, until the permanent service should be reorganized. With the assistance being rendered by private organizations and by the States and municipalities, it would therefore have been possible to carry on the service upon a fairly adequate basis for the five months. It was soon realized that the bills creating a permanent service would not be passed in time, and it therefore became necessary to further retrench in expenditures. The annual report of the service for the fiscal year ending June 30, 1919, thus characterizes the result of cutting down its appropriations.²

The result of the necessary reductions has meant the separation from the service of at least 80 per cent of the personnel, the closing of approximately one-half of the placement offices throughout the United States, the entire elimination of such special services as the handicap section and the professional and special section, the discontinuance of the publication of the official organ of the service, known as the United States Employment Service Bulletin, and the temporary abolishment of the farm service division.

Present Organization.

THE present organization of the Federal service as a national clearing house is set forth in a circular of the Director General of March 8, 1920. The Federal service does not maintain any offices of its own but works through the public employment exchanges of the States and cities. In those States where a public system of employment agencies is operating, the head of that system is a dollar-a-year man of the Federal Employment Service. This is the case in the States of California, Colorado, Connecticut, Illinois, Indiana, Iowa, Kansas, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, and Wisconsin. In the other States the labor commissioner or his deputy or other person designated by the governor acts as the representative of the Federal service. There are 7 States in which no cooperation

² Annual report of the Director General, United States Employment Service, to the Secretary of Labor fiscal year ended June 30, 1919. Washington, 1919, p. 56.

between the State and Federal service has been established; that is, the service has at present cooperative arrangements with 40 States and the District of Columbia. In Maine the three offices communicate directly with the Federal service without the cooperation of the State. In Virginia one municipal office is cooperating with the Federal service. In Nevada, Utah, and Wyoming only one Federal office is maintained in each, and no Federal or cooperating offices exist in Idaho, New Mexico, Tennessee, and Vermont. Cooperative arrangements are in progress of completion in Delaware and New Hampshire. Altogether the Federal service has 227 local employment exchanges. The cities in which the offices in the various States are located are as follows:

PUBLIC EMPLOYMENT OFFICES COOPERATING WITH UNITED STATES EMPLOYMENT SERVICE.

State and city.	Number in State.	State and city.	Number in State.	State and city.	Number in State.
Alabama.....	2	Indiana.....	9	Michigan—Concluded.	
Birmingham.		Indianapolis.		Saginaw	
Mobile.		East Chicago.		Traverse City.	
Arizona.....	1	Evansville.		Minnesota.....	3
Phoenix.		Fort Wayne.		Minneapolis.	
Arkansas.....	1	Lafayette.		Duluth.....	
Little Rock.		Muncie.		St. Paul.	
California.....	11	South Bend.		Mississippi.....	5
San Francisco.		Terre Haute.		Jackson.	
Chico.		Hammond.		Canton.	
Fresno.		Iowa.....	4	Greenwood.	
Long Beach.		Des Moines.		Hattiesburg.	
Los Angeles.		Creston.		Meridian.	
Marysville.		Clinton.		Missouri.....	3
Oakland.		Sioux City.		St. Louis.	
Sacramento.		Kansas.....	5	Kansas City.	
San Diego.		Topeka.		St. Joseph.	
San Jose.		Hutchinson.		Montana.....	9
Stockton.		Kansas City.		Helena.	
Colorado.....	3	Wichita.		Bozeman.	
Colorado Springs.		Salina.		Billings.	
Denver.		Kentucky.....	1	Chinook.	
Pueblo.		Frankfort.		Glasgow.	
Connecticut ¹	5	Louisiana.....	1	Great Falls.	
Five offices.		New Orleans.		Hardin.	
District of Columbia.....	1	Maine.....	3	Lewistown.	
Washington.		Augusta.		Roundup.	
Florida.....	3	Portland.		Nebraska.....	2
Jacksonville.		Bath.		Lincoln.	
Miami.		Maryland.....	1	Omaha.	
Tampa.		Baltimore.		Nevada.....	1
Georgia.....	5	Massachusetts.....	8	Carson City.	
Atlanta.		Boston.		New Jersey.....	14
Augusta.		Fitchburg.		Atlantic City.	
Columbus.		Framingham.		Asbury Park.	
Macon.		Lowell.		Bayonne.	
Waycross.		Lynn.		Camden.	
Illinois.....	13	Springfield.		Dover.	
Chicago.		Waltham.		Elizabeth.	
Alton.		Worcester.		Jersey City.	
Aurora.		Michigan.....	12	Newark.	
Bloomington.		Detroit.		New Brunswick.	
Danville.		Battle Creek.		Orange.	
Decatur.		Bay City.		Paterson.	
East St. Louis.		Flint.		Perth Amboy.	
Freeport.		Grand Rapids.		Phillipsburg.	
Joliet.		Jackson.		Trenton.	
Peoria.		Kalamazoo.		New York.....	25
Rockford.		Lansing.		New York City (10	
Rock Island.		Marquette.		offices).	
Springfield.		Muskegon.		Albany.	

¹ Bridgeport, Hartford, New Haven, Norwich, Waterbury; not shown on map, p. 129.

PUBLIC EMPLOYMENT OFFICES COOPERATING WITH UNITED STATES EMPLOYMENT SERVICE—Concluded.

State and city.	Number in State.	State and city.	Number in State.	State and city.	Number in State.
New York—Concluded.		Oklahoma—Concluded.		Texas—Concluded.	
Auburn.		Oklahoma City.		Texarkana.	
Binghamton.		Muskogee.		Waco.	
Bronx.		Sapulpa.		Utah—	1
Buffalo.		Tulsa.		Salt Lake City.	
Brooklyn.		Oregon—	3	Virginia—	1
Dunkirk.		Eugene.		Richmond.	
Elmira.		Marshall.		Washington—	5
Jamestown.		Portland.		Bellingham.	
Newburgh.		Pennsylvania—	9	Seattle.	
Niagara Falls.		Altoona.		Spokane.	
Rochester.		Erie.		Tacoma.	
Schenectady.		Harrisburg.		Yakima.	
Syracuse.		Johnstown.		West Virginia—	7
Troy.		McKeesport.		Bluefield.	
Utica.		Philadelphia.		Charleston.	
Watertown.		Pittsburgh (2 of- fices).		Clarksburg.	
Yonkers.		Scranton.		Martinsburg.	
North Carolina—	4	Rhode Island—	2	Huntington.	
Asheville.		Newport.		Parkersburg.	
Charlotte.		Providence.		Wheeling.	
Raleigh.		South Dakota—	6	Wisconsin—	12
Wilmingon.		Aberdeen.		Ashland.	
North Dakota—	2	Huron.		Green Bay.	
Bismarck.		Mitchell.		La Crosse.	
Fargo.		Pierre.		Manitowoc.	
Ohio—	7	Rapid City.		Milwaukee.	
Akron.		Sioux Falls.		Madison.	
Cincinnati.		Texas—	8	Oshkosh.	
Cleveland.		Dallas.		Racine.	
Columbus.		Denison.		Rhineland.	
Dayton.		El Paso.		Sheboygan.	
Toledo.		Fort Worth.		Superior.	
Youngstown.		Houston.		Wausau.	
Oklahoma—	6	San Antonio.		Wyoming—	1
Ardmore.				Cheyenne.	
Enid.					

FEDERAL DIRECTORS AND REPRESENTATIVES.

[Except as designated, titles are "Federal Director."]

State.	Name.	Address.	City.
Alabama.....	H. K. Milner.....	1807 Jefferson County Bank Building.	Birmingham.
Arizona.....	Hywel Davies.....	121 North 2d Avenue.	Phoenix.
Arkansas.....	T. A. Wilson.....	State Capitol (room 129a).	Little Rock.
California.....	John P. McLaughlin.....	933 Mission Street.	San Francisco.
Colorado.....	Wm. L. Morrissey.....	Statehouse.	Denver.
Connecticut.....	Wm. S. Hyde.....	State Department of Labor.....	Hartford.
District of Columbia.....	Geo. C. DeNeale.....	1410 Pennsylvania Avenue.....	Washington, D. C.
Florida.....	J. C. Privett.....	120 West Bay Street.....	Jacksonville.
Georgia.....	H. M. Stanley.....	318 State Capitol.	Atlanta.
Illinois.....	W. C. Lewman.....	116 North Dearborn Street.	Chicago.
Indiana.....	Fred Kleinsmith.....	Statehouse.	Indianapolis.
Iowa.....	A. L. Urlick.....	114 Courthouse.	Des Moines.
Kansas.....	J. H. Crawford.....	Statehouse.	Topeka.
Kentucky.....	W. C. Hanna.....	State Department of Agriculture and Labor.	Frankfort.
Louisiana.....	Levering Moore.....	612 Carondelet Street.....	New Orleans.
Maine.....	H. B. Brawn.....	Box 22.	Augusta.
Maryland.....	Chas. J. Fox.....	State Board of Labor and Statistics.	Baltimore.
Massachusetts.....	E. Leroy Sweetser.....	409 Statehouse.	Boston.
Michigan.....	Perry J. Ward (deputy commissioner of labor).		Detroit.
Minnesota.....	John P. Gardiner.....	Federal Building.	Minneapolis.
Mississippi.....	A. B. Hobbs.....	Box 776.	Jackson.
Missouri.....	Wm. H. Lewis.....	11 North 7th Street.	St. Louis.
Montana.....	W. J. Swindelhurst.....	State Capitol.	Helena.

FEDERAL DIRECTORS AND REPRESENTATIVES—Concluded.

State.	Name.	Address.	City.
Nebraska.....	Frank A. Kennedy.....	Statehouse.....	Lincoln.
Nevada.....	Robert S. Cole.....	Commissioner of Labor.....	Carson City.
New Jersey.....	Lewis T. Bryant.....	State Capitol.....	Trenton.
New York.....	Henry D. Sayer.....	124 East 28th Street.....	New York City.
North Carolina.....	M. L. Shipman.....	State Department Building.....	Raleigh.
North Dakota.....	J. N. Hagan.....	Capitol Building.....	Bismarck.
Ohio.....	Geo. F. Miles.....	Majestic Building.....	Columbus.
Oklahoma.....	Claude E. Connally.....	State Capitol.....	Oklahoma City.
Oregon.....	W. W. Fitzgerald.....	Courthouse.....	Portland.
Pennsylvania.....	Jacob Lightner (director of employment, Department of Labor and Industry). Geo. H. Webb.....	.....	Harrisburg.
Rhode Island.....	.....	Statehouse.....	Providence.
South Dakota.....	Chas. McCaffree.....	State Capitol.....	Pierre.
Tennessee.....	.....	.....	.....
Texas.....	H. W. Lewis.....	1306 South Flores Street.....	San Antonio.
Utah.....	Miss Carolyn I. Smith.....	Industrial Commission.....	Salt Lake City.
Virginia ¹	E. J. Conway (Federal representative).	5 City Hall.....	Richmond.
Washington.....	W. C. Carpenter.....	.....	Spokane.
West Virginia.....	Thos. Cairns.....	126 Summers Street.....	Charleston.
Wisconsin.....	Geo. P. Hambrecht.....	State Capitol.....	Madison.
Wyoming.....	Harry C. Hoffman.....	Capitol Building.....	Cheyenne.

¹ Municipal office.

In most States where active public systems are in operation there is little difficulty in securing cooperation in the regular reporting of work done. In some States, where means are lacking, the Federal service makes small monthly allotments to assist in paying for necessary statistical work and the compilation of reports. In other States certain private organizations cooperate with the Federal authorities in maintaining the exchanges. Among such organizations are the community service, groups of business interests, chambers of commerce, the Young Men's Christian Association, the Red Cross, and the American Legion.

The State representatives and directors are merely channels of communication through which the State and municipal offices report. The local offices report their surplus of registrations or help-wanted calls to the State director or Federal representative and these are matched against each other, so that through the State director or representative there is presumably maintained a system of clearance between the local offices. The problem now before the service is to establish a more effective system of interstate clearance.

In its circular of March 8, 1920, the Employment Service took the first step toward a system of zone clearance for matching the surplus of labor in one State against the deficit in another. The country has been divided into 13 labor clearance zones corresponding generally with the Federal Reserve bank districts. The 13 zones with their headquarters and the States included under each are as follows:

FEDERAL EMPLOYMENT SERVICE LABOR CLEARANCE ZONES.

Zone.	Headquarters.	States included.
1	Boston, Mass.....	Massachusetts, Maine, Vermont, New Hampshire, Rhode Island.
2	New York, N. Y.....	New York, Connecticut, New Jersey.
3	Harrisburg, Pa.....	Pennsylvania, Delaware.
4	Columbus, Ohio.....	Ohio, West Virginia.
5	Raleigh, N. C.....	Maryland, Virginia, North Carolina, South Carolina.
6	Atlanta, Ga.....	Georgia, Alabama, Mississippi, Louisiana, Florida.
7	Chicago, Ill.....	Illinois, Indiana, Michigan, Wisconsin, Iowa.
8	St. Louis, Mo.....	Kentucky, Missouri, Arkansas, Tennessee.
9	St. Paul, Minn.....	Minnesota, North Dakota, South Dakota, Montana.
10	Kansas City, Kans.....	Nebraska, Kansas, Oklahoma, Colorado, Wyoming.
11	San Antonio, Tex.....	Texas, New Mexico.
12	San Francisco, Calif.....	Arizona, Utah, Nevada, California.
13	Portland, Oreg.....	Idaho, Oregon, Washington.

As soon as funds are made available for the purpose it is proposed to establish in each of the labor clearance zones a zone clearance office under a paid zone clearance officer. At present, however, it has been possible to put paid Federal directors in only three of the zones, namely, zone No. 6, centering at Atlanta, Ga., and comprising the States of Georgia, Alabama, Mississippi, Louisiana, and Florida; zone No. 7, with headquarters at Chicago, Ill., and including the States of Illinois, Indiana, Michigan, Wisconsin, and Iowa; and zone No. 10, with headquarters at Kansas City, Kans., and including the States of Nebraska, Kansas, Oklahoma, Colorado, and Wyoming. In the remaining 10 zones the unpaid representatives in the State where the headquarters of the zone is located act as zone clearance officers, in addition to their other functions of State representatives. Respecting the designation of the three zones with active paid zone clearance officers, Circular No. 2 of March 8, 1920, of the Employment Service, states that "these assignments have been made with a view to the best adaptation of the available resources to the industrial and agricultural requirements of the various zones." These zones represent in a general way the agricultural region of the Southern States, the harvest region of the Middle West, and the industrial district centering at Chicago, Ill.

Under the cooperative agreements which the various States have with the Federal service, all local placement offices within a State report direct to the Federal director for that State. Circular No. 2, already quoted, states further: "The national clearance system depends upon the existence in each State of a comprehensive and effective system of clearance within such State, and it is assumed that, so far as possible, each State will supply its immediate needs from its own resources of workers and of industrial opportunities. Any balances of either opportunities or applicants remaining undisposed of within any State should be reported by the Federal director for that State to the zone clearance officer, and, if undisposed of within the zone, eventually reported by the zone clearance officer to the national clearing house at Washington."

The functions of the zone clearance officer can not be better defined than in the words of the circular in question:

It should be understood that the functions of zone clearance officers are merely executive and not supervisory in any sense. The Federal director is the sole representative of this service in his State so far as employment activities are concerned. The duties of zone clearance officers involve merely the coordination of the activities of the Federal directors for the various States within their zones and do not extend to soliciting opportunities for employment, recruiting workers, or placement work of any kind.

Under the plan of operation each State cooperating with the Federal service secures for its own use the following information:

(a) A daily report of labor surplus and of labor wanted from each of the public and affiliated employment offices operated in the State.

(b) Weekly or more frequent reports from labor organizations of men seeking employment.

(c) Weekly or more frequent reports as to labor wanted from local boards of trade, chambers of commerce, and other employers' organizations.

(d) Information as to men or women wanted derived from the advertising columns of newspapers, from communications from employers, or from systematic inquiries pursued from time to time among employers of labor.

These reports by the States will be collated by the zone clearance officer of the zone in which the respective States are located and forwarded to the Federal service at Washington.

After the State organization has effected the local shifting of labor on the basis of the information so gathered, the surplus is reported to the zone clearance officer on a prepared form. The same form is also adaptable for clearance between States and zones to the National office at Washington. The forms below are the ones used.

U. S. DEPARTMENT OF LABOR.

U. S. EMPLOYMENT SERVICE.

REPORT OF APPLICANTS NOT PLACED AND WILLING TO LEAVE THE CITY.

City _____
Date _____ Superintendent _____

Name of applicant.	Principal occupation.	Other experience.	Single, married, or widowed.	Age.	Sex.	Color.	Minimum wage demanded.	Do you recommend applicant?	Limit applicant can pay for transportation.

INSTRUCTIONS.—Fill out this report daily and send in with daily report. When registering applicants, be sure to ask if willing to leave the city, and enter answer on the card. Before dismissing applicants, after failure to place them, ask for those willing to leave locality. Report only those willing to leave. This report must show the situation at the close of the day, the latest canceling all previous reports on this form: all applicants, whether previously reported or not, should be included hereon.

MONTHLY LABOR REVIEW.
U. S. DEPARTMENT OF LABOR.
U. S. EMPLOYMENT SERVICE.

REPORT OF ORDERS FOR HELP UNFILLED AND IMPOSSIBLE TO FILL LOCALLY.

City _____
Date _____ Superintendent _____

Kind of work.	Number wanted.	Probable wages.	Hours.	Sex.	Color.	Age limit.	Duration of job.	Latest date for filling order.	Amount employer will provide for transportation.	Probable cost of board.
.....										
.....										
.....										
.....										

INSTRUCTIONS.—Fill out this report daily and send in with daily report. Report only those orders which will allow sufficient time to transfer applicants and obtain all of the information requested. If necessary, use more than one line in giving details of orders.

The form for reporting “male” placements is shown below. The form for “female” placements is identical. It is also further directed that the report should specify, whenever workers are wanted, the specific plant needing them, the wages paid, and the living conditions afforded. For this latter information no special form of inquiry is demanded, a letter giving the necessary information being sufficient. In addition, telegraphic reports should be submitted in any case of acute shortage or surplus of labor, indicating the need for immediate relief.

WEEKLY SUMMARY BY LOCAL OFFICES.

U. S. DEPARTMENT OF LABOR.
U. S. EMPLOYMENT SERVICE.

State of _____ Week ending _____
Sex, male.

Offices.	Registrations.	Help wanted.	Referred.	Reported placed.
_____ (name of city):				
Skilled.....				
Unskilled.....				
Clerical and professional.....				
Total.....				
_____ (name of city):				
Skilled.....				
Unskilled.....				
Clerical and professional.....				
Total.....				
Grand totals.....				

(Signature) _____,
Federal Director.

From these office reports the statistical reports are made up. On the "male" report are shown occupations classified as skilled, unskilled, and clerical and professional, and on the "female" report the occupations are classified as "domestic," "industrial," and "clerical and professional."

The matching of the "labor surplus" against the "labor wanted" takes place daily within each zone, while interzone or national clearance will be effected by the national clearing house at Washington on the basis of weekly or more frequent reports of "labor surplus" or "labor wanted." The zone clearance officers are also required to report weekly, or more frequently, the state of the labor market in all parts of their respective zones. While the zone clearance officers usually communicate only through the national office at Washington, they are permitted in case of emergency to communicate directly with the zone clearance officer of an adjoining zone with a view to effecting directly and without loss of time the adjustment of labor surplus and demand as between such two or more zones.

The Federal service hopes to be able to furnish a weekly bulletin of such information as has been described above covering the entire country, and also by the publication of a monthly summary of labor and employment conditions throughout the United States, with reports of registration placements and clearances and full information as to industrial conditions and prospects in this and foreign countries.

Statistics of Operations.

EXCEPT for the period of the war, the Employment Service has never had a monopoly of the placement of labor, and although it practically dominated the field during the war, naturally a considerable amount of labor was placed and moved without its intervention. In a time of great demand for labor the workers are not likely to make full use of the employment exchanges. For these reasons, therefore, the statistics of operations of the Service can not be used as an index or criterion of the state of the labor market. At the most, they reflect a varying and fluctuating amount of public service rendered to employers and employees of the country.

TABLE 1.—EMPLOYMENT WORK OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, MAY, 1915, TO DECEMBER, 1917.¹

Year and month.	Help wanted.	Registrations. ²	References to positions.	Positions filled.
1915: May.....	3,826	12,132	3,752	3,495
June.....	3,601	14,530	5,131	4,646
July.....	8,665	18,061	6,360	6,035
August.....	7,931	17,827	7,321	6,757
September.....	4,551	13,334	5,671	5,405
October.....	5,423	12,215	5,460	5,006
November.....	4,650	11,908	4,459	4,146
December.....	3,588	11,902	2,622	2,170
Total.....	42,235	111,909	40,776	37,660

¹ Figures for 1915 and 1916 are from Bulletin 241, U. S. Bureau of Labor Statistics, p. 52; figures for 1917 are from the MONTHLY REVIEW, U. S. Bureau of Labor Statistics, March, 1918, pp. 152 and 153.

² Includes re-registrations.

TABLE 1.—EMPLOYMENT WORK OF THE DIVISION OF INFORMATION, BUREAU OF IMMIGRATION, MAY, 1915, TO DECEMBER, 1917—Concluded.

Year and month.	Help wanted.	Registra-tions.	References to positions.	Positions filled.
1916: January.....	5,063	15,015	4,300	3,419
February.....	6,413	14,257	5,086	4,185
March.....	10,269	19,484	8,113	7,020
April.....	12,104	18,498	8,843	7,653
May.....	21,326	17,614	12,938	11,453
June.....	17,402	18,824	13,639	11,960
July.....	23,657	24,058	17,608	16,309
August.....	26,791	23,720	18,062	16,313
September.....	27,185	26,276	19,643	17,169
October.....	27,985	28,504	21,780	19,044
November ³	25,995	27,318	24,618	18,822
December.....	21,533	26,805	21,139	16,597
Total.....	225,663	255,373	175,923	149,954
1917: January.....	26,602	33,780	26,698	20,008
February.....	28,482	29,701	23,532	13,367
March.....	36,950	23,933	35,452	27,271
April.....	42,074	39,247	37,451	28,745
May.....	46,125	48,099	41,301	32,061
June.....	51,718	43,145	40,678	32,330
July.....	64,466	50,866	46,239	38,113
August.....	81,350	65,066	57,247	46,859
September.....	84,226	57,031	56,552	46,586
October.....	83,928	69,031	62,104	51,093
November.....	90,722	78,139	67,226	58,027
December.....	82,029	81,898	62,840	51,439
Total.....	718,012	619,870	557,320	445,899

³ Inclusive of activities in cooperation with State and municipal employment offices in the State of New York.

TABLE 2.—SUMMARY ACTIVITIES OF THE UNITED STATES EMPLOYMENT SERVICE AS REORGANIZED AS AN INDEPENDENT SERVICE.

Year and month.	Help wanted.	Registra-tions.	References to positions.	Positions filled.
1918: January.....	89,002	82,253	62,642	51,183
February.....	92,594	92,452	70,369	58,844
March.....	177,831	144,166	118,079	100,446
April.....	320,328	195,578	171,306	149,415
May.....	328,587	206,181	179,821	156,284
June.....	394,395	246,564	221,946	192,798
July.....	484,033	282,294	250,152	217,221
August.....	1,227,705	555,505	500,510	395,530
September.....	1,476,282	531,226	513,662	362,696
October.....	1,588,975	594,737	606,672	455,931
November.....	1,724,943	744,712	748,934	558,469
December.....	1,024,330	549,593	525,486	392,934
Total.....	8,929,005	4,225,251	3,969,579	3,091,821
1919: January.....	730,881	587,200	514,436	372,196
February.....	487,475	496,299	406,824	299,118
March.....	539,393	523,736	440,833	327,660
April.....	387,256	364,061	309,158	232,135
May.....	510,689	487,929	424,738	323,587
June.....	519,485	449,155	404,948	319,813
July.....	373,577	345,759	291,076	236,540
August.....	444,802	390,629	340,403	266,872
September.....	327,991	260,275	240,345	188,054
October.....	159,408	135,565	123,947	95,568
November.....	203,139	181,647	174,169	137,727
December.....	158,245	134,065	135,295	110,431
Total.....	4,842,341	4,356,320	3,806,172	2,919,691
1920: January.....	234,457	180,242	193,972	160,969
February.....	197,567	142,717	150,844	131,659
March.....	209,229	169,116	169,658	141,944
April.....	238,718	180,201	179,464	165,042

TABLE 3.—PERCENTAGE ANALYSIS OF WORK OF FEDERAL EMPLOYMENT OFFICES, MAY, 1915, TO APRIL, 1920, AND OF OTHER PUBLIC EMPLOYMENT OFFICES DURING 1917.

Period.	Per cent—			
	Help wanted is of registrations.	Positions filled are of help wanted.	Positions filled are of registrations.	Positions filled are of persons referred to positions.
1915 (8 months).....	37.7	96.5	33.6	92.4
1916.....	83.4	66.5	58.7	85.2
1917 (public other than Federal).....	110.4	82.1	90.6	95.9
1917 (Federal).....	115.8	62.1	71.9	80.0
1917 (public and Federal).....	112.0	76.0	85.2	91.4
1918.....	211.3	34.6	73.2	77.9
January.....	108.2	57.5	62.2	81.7
February.....	100.2	63.6	63.7	83.6
March.....	123.4	66.5	69.7	85.1
April.....	163.8	46.4	76.4	87.2
May.....	159.4	47.6	75.8	86.9
June.....	160.0	48.9	78.2	86.9
July.....	171.5	44.9	77.0	86.9
August.....	221.0	32.2	71.2	79.0
September.....	277.9	24.6	68.3	70.6
October.....	267.2	28.7	76.7	75.2
November.....	231.6	32.4	75.0	74.6
December.....	186.4	38.4	71.5	74.8
1919.....	124.4	50.9	63.4	72.3
January.....	98.7	62.4	61.2	74.0
February.....	102.7	60.7	62.5	73.5
March.....	106.3	50.9	63.7	74.9
April.....	104.6	65.5	68.3	78.5
May.....	113.4	61.5	68.9	78.9
June.....	108.3	63.3	68.4	81.2
July.....	113.8	60.9	68.3	78.3
August.....	126.0	57.3	72.2	78.2
September.....	117.3	47.4	70.5	77.1
October.....	111.7	67.7	75.2	79.0
November.....	118.0	69.6	82.3	81.6
December.....	130.1	68.6	89.3	83.0
1920.....	138.4	66.0	92.2	86.6
January.....	123.7	67.8	84.0	88.7
February.....	132.5	63.3	83.8	84.2

Junior Division.³

WITH the curtailment of the Service at the end of 1918 following the armistice, among other divisions discontinued was the Boys' Working Reserve. The elimination of this service would have left uncared for, and without means of assistance in finding positions, the thousands of boys then in agriculture for whom the division had been established. Other thousands in industry for whom no provision as respects placement and entry into industry had ever been made were also to be considered.)

The purpose of the Junior Division, which took the place of the Boys' Working Reserve, was the "guidance and placement of boys and girls under 21 years of age." The junior work is done in close cooperation with the public schools and with other agencies interested in juvenile problems.

³ See also Monthly Labor Review of the U. S. Bureau of Labor Statistics, February, 1919, pp. 117-119.

The enterprise is still in its initial stages, although begun actively in March, 1919. Cooperation has been established with the educational authorities in New York City, Boston, Mass., Providence, R. I., Philadelphia, Pa., Pittsburgh, Pa. (where two offices are maintained), Cleveland, Ohio, South Bend, Ind., Milwaukee, Wis., St. Paul, Minn., and Benton Harbor, Mich. The National Employment Service generally pays half the expenses and the local school system half. Local school officials are in charge of the active work of placement. The Federal office sets standards and furnishes guidance and counsel in the work.

In order to build up a staff of trained vocational guidance workers the National Employment Service has undertaken to establish or pay for study scholarships in the universities. Thus far only four scholarships—at the University of Chicago—have been created. It is not claimed that the service has accomplished very much as yet. Its main significance lies in the fact that it has made a practical beginning in vocational guidance and placement on a national scale. It may succeed in nationalizing the problems of juvenile placement.

Labor Market in Germany and Switzerland.

Germany (January, 1920).

ACCORDING to a report of the German Statistical Office summarized in the *Deutsche Allgemeine Zeitung*¹ the German labor market in January was still dominated by the coal shortage. The effect of the railway strikes and the stoppage of traffic on the most important waterways was very manifest.

Reports from 35 trade-unions showed that 153,566 members out of 4,719,225, i. e., 3.3 per cent, were out of work in January. On December 30, 1919, the trade-unions reported 131,598 out of 4,495,743 members, i. e., 2.9 per cent, out of work. In January, 1919, 165,178 out of a total of 2,520,585 trade-union members, or 6.6 per cent, were unemployed. The number of persons receiving unemployment allowances on February 1, 1920, was 371,675, according to the report of the demobilization commissioners (on Jan. 1, 1920, their number was 386,818). For every 100 vacant positions reported to the public employment offices in January there were 183 male or 109 female applicants, as compared with 189 and 125 in December, 1919. Another index of the state of employment is the membership of the sick funds, for every employed worker must be a contributory member of such a fund. According to the reports of 4,910 sick funds the number

¹ *Deutsche Allgemeine Zeitung*. Berlin, Feb. 28, 1920. Evening edition.

of compulsorily insured members increased during January, 1920, by 37,924, or 0.4 per cent, the number of male members increasing by 0.6 per cent to 5,283,565, and that of female members by 0.2 per cent to 3,280,029.

Switzerland (February, 1920).

THE monthly report of the Swiss Federal Central Employment Office² for February, 1920, indicates a marked improvement of the labor market. In the case of men there were in February 7,053 vacant positions as against 5,810 in January, an increase of 1,243. The number of male applicants, on the other hand, decreased from 8,759 in January to 7,752 in February. For every 100 vacant positions for men in February there were 110 applicants, as compared with 151 in January, 1920, and 197 in February, 1919. Unskilled building trades' workers, electricians, plumbers, firemen, machinists, saddlers, bakers, butchers, and printers were still unemployed in large numbers. Considerable unemployment prevailed also among certain groups of workers of the watch, embroidery, and hotel industries, clerks, stockkeepers, packers, and factory workers. About 300 peddlers were idle, peddling in the country having been prohibited owing to a live-stock epidemic. More than 200 professional men were also idle. In agriculture the demand for labor exceeded the supply. Blacksmiths, carriage makers, masons, and miners were also in great demand.

In the case of female workers the demand exceeded the supply. The number of vacant positions for women increased from 3,277 in January to 3,330 in February. There were only 2,261 applicants to fill these 3,330 vacancies. The number of applicants per 100 vacant positions for women was 68 in February as against 65 in January. Female help is most in demand for domestic service, in the hotels, and in the textile industry.

² Eidgenössische Zentralstelle für Arbeitsnachweis. Monatsbericht No. 2, February, 1920.

INDUSTRIAL HYGIENE.

Opportunities for the Study of Industrial Medicine in the United States.

By AUGUSTA SHUFORD.

MODERN industrial medicine has received the endorsement of economists, sociologists, and physicians as one of the principal means upon which hope of securing better industrial and social conditions must be based.

The "new specialty," or "mass medicine" as it is frequently called, has been variously defined. Many physicians use the term "industrial medicine" as if its meaning were limited to the treatment of industrial accidents and occupational diseases, but this idea is rapidly giving place to a larger conception of its scope, based upon the growing recognition of industrial medicine, and particularly of that important part of it known as industrial hygiene, as a very vital factor in preventive medicine. Perhaps the best definition is that which recognizes it as all branches of medicine and surgery in their application to the prevention and treatment of accidents and sickness in industrial workers. The term will here be used in this last sense, though the exactness or consistency with which it is applied to the curricula of the different institutions cited is not vouched for.

The study of specific poisons and diseases in relation to certain occupations is an old one, but it has never been a popular branch of medicine. In the last few years employers of large numbers of people have begun to estimate the advantage to themselves of retaining the services of special physicians to supervise the hygienic conditions in their plants and to attend their sick and injured employees, so that at present a considerable number of physicians are thus employed, while others are engaged in the care of Federal and other public employees. A few public clinics for the treatment of industrial accidents or diseases, or both, have also been established. But while such avenues have been opened for the practice of industrial medicine, physicians who wished to specialize on this subject have, up to the present time, found meager facilities offered for training for their work. The lessons of the war and of reconstruction have, however, drawn marked attention to economic waste through accident and ill health and to the rôle which industrial medicine can be made to play, by reducing these, in the adjustment of industrial and social problems. Very recently steps have been taken to provide adequate training in industrial medicine in a few of

our educational institutions, while the subject is receiving more or less attention in a number of others.

This article is based mainly upon answers to letters sent to the heads of medical colleges and of the medical faculties of universities, inquiring as to the facilities offered by educational institutions and in clinics for the study of industrial medicine. No attempt is here made to give an exhaustive list of educational institutions including industrial medicine or hygiene in their curricula or of clinics specializing in the treatment of industrial diseases or accidents, but merely to present a substantially true picture of the situation regarding the facilities offered for the training of industrial physicians, by noting the most conspicuous work being done along this line and citing typical but less ambitious efforts.

Educational Institutions Offering Courses in Industrial Medicine.

INDUSTRIAL medicine, where it has received any attention at all in the curricula of medical colleges and of universities in this country, has been an outgrowth from a course devoted to public health and has usually been offered as part of such a course.

Courses Leading to Degree in Industrial Medicine or Hygiene

Harvard University Medical School, Boston, Mass., was the first institution to establish a course leading to a degree in industrial hygiene and is the only institution which offers a doctorate in the subject. Work was begun during the session of 1918-19, and according to the plan then inaugurated and which was adopted for the session of 1919-20, when the enterprise was affiliated with the work in public health already established by Harvard University and the Massachusetts Institute of Technology, courses leading to two degrees are open to students holding the degree of doctor of medicine—a certificate in public health in industrial hygiene, obtained after one year's work (eight months in residence), and a doctorate in public health in industrial hygiene, obtained after two years' work. For the session of 1920-21 elective eight-month courses in industrial medicine are to be open to members of the fourth-year class in the medical college.

Courses leading to the certificate in public health in industrial hygiene include the following subjects: Applied physiology of industry, methods of air analysis, industrial toxicology, vital statistics, industrial sanitation, preventive medicine and hygiene, industrial health administration, employment management, workmen's compensation and the legal aspects of industrial disease, nutrition, industrial surgery, orthopedic surgery, and industrial medicine. These subjects also form the work of the first year for candidates for the degree of doctor of public health in industrial hygiene, the second

year being devoted to an investigation upon some phase of industrial health. Among adjunct lectures and accessory courses available for students this year are the Cutter lectures in preventive medicine and a course of Lowell lectures, both by Dr. Thomas M. Legge, chief medical inspector of factories in Great Britain.

Work in the occupational disease clinic of the Massachusetts General Hospital is required of all students of industrial medicine who possess the medical degree.

The school of public health offers two degrees to graduate non-medical students: Doctor of philosophy in hygiene and a certificate in public health. Candidates for these degrees may also take selected courses in industrial hygiene. Women are admitted, through Radcliffe College, as candidates for these degrees, and to all individual courses in industrial hygiene, but not as candidates for the medical degrees in industrial hygiene.

A general survey of psychiatric work in relation to industry is being made and it is hoped soon to extend the work in industrial hygiene into this almost unworked field.

The University of Cincinnati Medical School, Cincinnati, Ohio, established in 1919 a department of industrial hygiene and public health.

By the plan outlined for the term beginning in October, 1919, the course of instruction is to occupy one school year, be open to graduates in medicine, and lead to a certificate of public health in industrial medicine. The program calls for (1) the training of students in industrial medicine and public health, and (2) field work in industrial medicine among industries in the district. The field work undertaken has consisted largely of surveys and inspections of plants in terms of safety hazards, occupational disease hazards, general sanitation, physical examinations, medical relief, absenteeism, turnover, etc. Up to December 19, 1919, surveys of about 60 plants in Cincinnati had been made.

The plan also includes the cooperation of the department with the National Safety Council, the safety director of the department being the local secretary of the council. A course of 15 lectures, covering the fundamentals of safety and sanitary principles, is given at the university in the evening and is open to students of the medical college, safety engineers in the city, and students in engineering; and a course of eight lectures on industrial relations for executives is open to medical students and employment managers of the various plants.

The training of students in the clinical aspects of industrial medicine is provided by intimate contact with the industries of Cincinnati. In addition, an occupational disease clinic in the Cincinnati General Hospital is being organized.

Medical Courses Which Include Industrial Medicine.

A number of medical colleges include courses in industrial hygiene, either elective or prescribed, in their work leading to the degree of doctor of medicine.

Rush Medical College, of the University of Chicago, Chicago, Ill., offers in the senior year a 48-hour clinical and conference course, limited to 10 students, dealing with the human maintenance department in the industries, including preventive medicine. Another course, covering dangerous trades, industrial health hazards, and occupational diseases, and to which sociological as well as medical students are admitted, is given in the department of hygiene and bacteriology. Both courses are elective, but when taken they count on the requirements for the degree of doctor of medicine. Clinical work is offered in connection with the evening clinic in the Central Free Dispensary, located in the heart of the industrial region of Chicago. The college hopes, in the near future, to elaborate these courses in connection with the post-graduate school which is contemplated by the University of Chicago.

Ohio State University College of Medicine, Columbus, Ohio, offers, in its department of public health and sanitation, elective courses in industrial hygiene and preventive medicine to undergraduate medical students. The courses in industrial hygiene were established in 1915. During the war, however, only an elective course in personal hygiene for freshmen students and a prescribed course in preventive medicine for senior students were given, and for 1919-20 too few students registered to warrant giving any of the other courses.

While the university gives no curriculum termed "industrial medicine," students in the graduate school have been permitted to specialize in industrial hygiene and preventive medicine. These courses also were dropped at the beginning of the war, but during 1919-20 a few students, candidates for the degree of master of science, are specializing in industrial hygiene.

With the opening of the session of 1919-20, in order to meet the demand for health commissioners in the State of Ohio, an extension course, in which industrial medicine was stressed, open to graduate physicians only, was substituted for the first two and a half months of the published graduate courses. This course was given in cooperation with the Ohio State department of health and included among its faculty members of the department.

In addition to these courses, the department of public health and sanitation gives minor courses, elective in nature, in personal hygiene, public health problems, industrial hygiene, and public health administration, to undergraduate students in the colleges of arts, philosophy, and science, education, and commerce and journalism.

University and Bellevue Hospital Medical College, New York City, includes in its regular work a course of 11 hours in industrial hygiene and occupational diseases, comprising seven didactic lectures and four quizzes, in which industrial environment and occupational diseases are discussed.

Columbia University College of Physicians and Surgeons, New York City, devotes one hour to industrial hygiene in its course leading to the medical degree. This subject was introduced in the session of 1918-19 as part of the public health course.

Johns Hopkins Medical School, Baltimore, Md., while giving no specific course in industrial hygiene, considers many of the problems involved in the subject in courses upon general medicine, surgery, and hygiene.

Detroit College of Medicine and Surgery, Detroit, Mich., has, for the session of 1919-20, added the subject to its regular course for medical students.

The University of Michigan Medical School, Ann Arbor, Mich., includes the subjects of industrial hygiene and occupational diseases in a course of lectures in hygiene.

Northwestern University Medical School, Chicago, Ill., gives a course of lectures on public health, which includes industrial medicine, to its fourth-year students.

Washington University College of Medicine, St. Louis, Mo., has recently introduced a course of 11 lectures on social medicine, in which a number of industrial problems are discussed by men who have had special experience. Clinical work is afforded by the industrial clinic in the out-patient department of the school.

Courses in Public Health.

A number of institutions offer work in industrial hygiene as part of their post-graduate courses in public health.

The University of Pennsylvania, Philadelphia, Pa., is placing considerable emphasis upon a course in industrial medicine and hygiene which is incorporated with the course in public health leading to the degree of doctor of public hygiene. The course includes visits to representative industrial plants, and service in connection with the first-aid stations and emergency hospitals in some of the larger plants. Clinical advantages are afforded by the occupational disease clinic of the university hospital.

Yale University, New Haven, Conn., while it offers no special degree in industrial hygiene, offers two degrees, a certificate and a doctorate, in public health, and some of the students working for these degrees specialize in industrial hygiene, including a course in industrial diseases. Those who so desire do special research work along industrial lines. The university, in conjunction with the

United States Public Health Service, has an experimental laboratory for the study of factory ventilation and the industrial dust hazard.

Syracuse University, Syracuse, N. Y., the *University of Illinois*, Urbana, Ill., and other institutions devote some measure of attention to industrial hygiene in connection with public health courses.

The following institutions offer courses leading to one or more of the four degrees in public health—doctor of public health, doctor of philosophy or doctor of science in public health, certificate in public health, and bachelor of science in public health or hygiene: The University of California, Berkeley, Calif.; Johns Hopkins Medical School, Baltimore, Md.; Harvard University Medical School, Boston, Mass.; Detroit College of Medicine and Surgery, Detroit, Mich.; the University of Michigan Medical School, Ann Arbor, Mich.; University and Bellevue Hospital Medical College, New York City; the University of Pennsylvania, Philadelphia, Pa.; the University of Wisconsin, Madison, Wis.; Ohio State University, Columbus, Ohio; Yale University School of Medicine, New Haven, Conn.; Chicago Hospital College of Medicine,¹ Chicago, Ill.; Tulane University of Louisiana,¹ New Orleans, La.; Union University,¹ Albany Medical College, Albany, N. Y.; and University of Colorado,¹ Boulder, Colo. The standardization of the courses leading to the four degrees has been the subject of considerable discussion. Representatives of several universities met at Yale in February, 1919, to consider the subject, and resolutions leading to such standardization were passed. It may reasonably be expected that, when secured, such standardization will involve the placing of some measure of emphasis upon the subject of industrial hygiene.

Related Courses.

The Phipps Institute, Philadelphia, Pa., and a few other institutions have carried on special research work in subjects pertaining to industrial hygiene.

The *Chicago School of Civics and Philanthropy*, Chicago, Ill., in cooperation with public health agencies of Chicago; *Simmons College*, Boston, Mass., in connection with the Instructive Nursing Association; and *New York University*, New York City, are prominent among institutions now offering industrial nursing as a course of study.

New York University, School of Commerce, Accounts, and Finance, offers in the second semester, February to June, 1920, a course in standardization of nursing service in industry, especially arranged for industrial nurses, welfare workers, and those intending to enter the field of industrial welfare work. The course includes lectures and group discussions of industrial nursing methods, first-aid equipment,

¹ Included in list given by Eugene C. Howe, in *American Journal of Public Health*, Chicago, August, 1918, pp. 600-607.

and preventive work in industrial plants. The class meets once a week for 15 consecutive weeks.

Smith College School for Social Work, Northampton, Mass., plans to establish permanently courses in psychiatric social work, medical social work, child welfare, and community service. The plan is the outcome of a successful experiment, tried in the summer of 1919, in training a group of social workers for the purpose of aiding in the reeducation and treatment of soldiers suffering from war neuroses and psychoses. The course embraced two months of didactic work at Smith College, followed by six months of practical work at various mental hospitals and clinics, which afforded a continuation of psychiatric instruction. Forty students completed the course and are holding positions as psychiatric social workers. This type of worker gives promise of meeting a special need, that of a medium between the psychiatrist and the homes of the community, in which maladjustments and incipient mental diseases are seldom brought to the knowledge of the physician.

The *Philadelphia School for Social Service*, Philadelphia, Pa.; the *New York School of Philanthropy*, New York City; the *Chicago School of Civics and Philanthropy*, Chicago, Ill.; and *Simmons College* and the *Boston School of Social Work*, Boston, Mass., offer somewhat similar courses.

The *Missouri Association for Occupational Therapy*, St. Louis, Mo., deals with various problems in which medicine and industry touch, and is prepared to make surveys of hospitals, sanitariums, and such institutions, to outline for them a system for installing an occupational department, and to furnish them with trained teachers. It maintains an occupational department in the city hospital, the city sanitarium, Barnes Hospital, and, in cooperation with the city board of health and the board of religious organizations, in the Girls' Detention Hospital.

The course of instruction offered by the association consists of seven months' training, which includes three months of practice work in hospitals. A certificate is given upon completion of the work. The class is limited to 15 members.

Public Industrial Clinics.

THE history of industrial clinics open to the public is a brief one. The first clinic of this nature in this country was established by Dr. W. Gilman Thompson in his department at the Cornell University Medical College, New York City, about 1907, but this clinic has since been discontinued. Besides several industrial clinics of widely distinct types which have abundantly proved their worth during the last few years, a number of more or less specialized clinics,

under both public and private auspices, are now doing or planning to do work along various lines of industrial medicine.

The Clinic for Functional Reeducation of Disabled Soldiers, Sailors and Civilians, New York City, was established by Dr. Thompson in February, 1918, as a war service, but it has from the first dealt with civilian as well as military cripples. The first patient was received July 15, 1918, and during the first year of the clinic's work 1,150 cases were treated, about 50 per cent of them coming from military and the other 50 per cent from civilian sources. The clinic now averages 100 treatments a day and has been forced to open night classes.

Cases have been referred to the clinic from various branches of the Federal Government, accident insurance companies, the Red Cross, railroad corporations, and industrial corporations. Private patients also are treated.

The clinic conducts departments of hydrotherapy, electrotherapy, thermotherapy, and massage, a social service department, and a department of occupational therapy.

With the exception of the clinic described, industrial clinics may be divided into three classes, according to whether they are operated in connection with (1) public hospitals, (2) medical colleges, or (3) State or municipal departments of health or of labor. In many cases cooperation between two of these in the use of the clinic is very close, as is instanced in the clinic of the Massachusetts General Hospital, which serves both the hospital and the Harvard Medical School. There are also a few other types of clinics which come under none of these classes. The work of the United States Public Health Service and clinics in industrial plants will not be here considered.

Clinics Connected with Public Hospitals and Medical Colleges.

The Occupational Disease Clinic of the Massachusetts General Hospital, Boston, Mass., was opened in March, 1916. A sketch of its work was published in the MONTHLY REVIEW for December, 1917 (pp. 185-193).

The total number of industrial diseases diagnosed at the clinic from February, 1919, to December, 1919, was 270. During this time more than 1,140 patients received attention, including 30 cases of various kinds of industrial poisoning, distributed as follows: Lead, 22 cases; anilin, 1 case; gasoline, 1 case; methyl alcohol, 1 case; trinitrotoluol, 1 case; benzol, 1 case; and 3 ill-defined cases. There were 13 cases of tuberculosis believed to be of occupational origin; 10 cases of occupational neurosis; 9 of trade eczema; and 32 of occupational strain.

The clinic is at present tabulating, according to age, sex, industry, and disease, the 30,000 new cases admitted to the out-patient depart-

ment of the hospital during 1919. Beginning with January, 1920, by means of a punch-card system, data relating to the incidence of disease in various industries and occupations will be constantly collected and made readily available.

The Hospital of the University of Pennsylvania, Philadelphia, Pa., organized an occupational disease clinic in 1914, the plan being to conduct it as a center for consultation and investigation, rather than as a place for treatment of numerous cases of varied character. Investigations of industrial problems so far undertaken embrace hygienic conditions in the cigar-making industry and among tobacco makers generally; pulmonary disease in potters and cement workers; conditions surrounding the employment of women in textile trades; and comparative investigations of dust within and outside industrial plants. Psychiatric cases are referred to the psychopathic clinic of the Department of Psychology of the university.

The Cincinnati General Hospital, Cincinnati, Ohio, is planning to open an occupational disease clinic by the fall of 1920 for the purpose of meeting the teaching requirements of clinical science which can not be fully met by the clinics in the industrial plants to which the college now has full access. In this clinic all the services of the hospital—including medicine, surgery, dermatology, ophthalmology, neurology, and pathology—will participate.

The Delray Industrial Hospital, Detroit, Mich., although originally founded by a commercial company for the use of its own employees, has now so far extended its scope that it may be considered an institution for the public. Primarily the object of the hospital has been to create an industrial institution, the scope of which would be limited to the handling of industrial accidents and diseases, but, owing to the lack of hospital facilities in general, and particularly in that portion of the city, it has been compelled to serve the community as well.

This hospital was organized as the Solvay General Hospital, Detroit, Mich., some 15 years ago by the Solvay Process Co. for the care of its injured employees. As it gradually expanded other firms and the local physicians were allowed to take advantage of it. It was reorganized in 1917 as a corporation under its present name.

There is a dispensary which serves as an out-patient department of the hospital and is responsible for all ambulatory sick cases, minor accidents, and physical examinations of the men when they are engaged for work. Whenever the case is serious enough to warrant it, a patient is referred to the hospital, where a thorough diagnosis, including X-ray and laboratory findings, can be made.

The report for 1918 shows that during the year there were 4,801 treatments in the out-patient department, including physical examinations, and 32,418 treatments in the dispensary, including physical examinations.

The following table shows the nature of the diseases treated:

MEDICAL AND SURGICAL CASES TREATED IN THE DELRAY INDUSTRIAL HOSPITAL DURING THE YEAR 1918.

Nature of case.	Medical.	Surgical.	Nature of case.	Medical.	Surgical.
Alcoholic.....	7	—	Infections.....	63	67
Appendicitis.....	12	66	Injuries.....	—	220
Arthritis.....	26	—	Luetic.....	17	—
Biliary tract.....	6	7	Lungs.....	25	4
Burns.....	—	30	Malignant growths.....	12	7
Cardiovascular.....	4	—	Miscellaneous.....	126	25
Diabetes.....	2	—	Nose and throat.....	46	180
Eye and ear.....	36	3	Obscure.....	2	—
Fevers.....	39	—	Observation.....	27	—
Fractures.....	—	113	Obstetrical.....	97	7
Gastrointestinal.....	69	24	Pneumonia.....	240	—
Genitourinary.....	22	15	Poison.....	7	—
Gout.....	1	4	Tuberculosis.....	28	6
Gunshot wounds.....	—	7	Tumors.....	2	—
Gynecological.....	25	100	Total.....	953	906
Heart.....	12	—			
Hernia.....	—	21			

The American Hospital, Chicago, Ill.,² has established an industrial department, and a special equipment for handling casualty cases is planned.

Rush Medical College Occupational Disease Clinic, Chicago, Ill., was the first established in the Middle West. It was founded by the Sprague Memorial Institute of Chicago University in July, 1911. After several changes, it was reestablished as an evening clinic at Rush Medical College.

Ohio State University Medical College Occupational Disease Clinic, Columbus, Ohio, the next industrial clinic in that section of the country, was established in 1915.

Washington University School of Medicine, St. Louis, Mo., holds each week an industrial clinic in its out-patient department. The placement officer of the bureau for the placement of the physically handicapped, conducted by the Red Cross, cooperates with the school physicians as regards the industrial problems and placement of patients attending the clinic. Attached to the dispensary is a workshop in which handicapped patients can be put to work under observation and their working capacity determined. The types of cases seen in the industrial clinic and the workshop are nervous, orthopedic, cardiac, and a few tuberculous cases.

Clinics Connected with State or Municipal Departments.

The Occupational Disease Clinic of the New York City Department of Health is a feature of the work in industrial hygiene which was organized in 1915. It is described in an article in the MONTHLY LABOR REVIEW for September, 1919 (pp. 298-300).

² *Modern Hospital*, Chicago, January, 1920, p. 60.

The Rehabilitation Clinic of the New Jersey Rehabilitation Commission, at Newark, N. J., under the State Department of Labor, promises to become an interesting development in this line of clinics. The clinic is to be fitted with the best appointments for orthopedic treatment, and the work of rehabilitation of those disqualified in industry completed by their reeducation, when necessary, and placement in employment.

The Newark Antituberculosis League, in cooperation with the State Department of Labor, has announced a plan for the institution of a night pay clinic for the diagnosis of industrial diseases.

The Ohio State Department of Health has a very active division of industrial hygiene, which, although it does not maintain a clinic, includes in its work the investigation of occupational disease complaints, by field work when required, gives advice to industrial plants, employees, or the industrial commission, and also does special research work and investigations.

Similar work of more or less extended scope is being carried on by other States and by local authorities.

Clinic for Workers in the Cloak and Suit Industry.

The Board of Sanitary Control of the Cloak and Suit Industry, New York City, has established a clinic for workers in that industry which may be considered as standing midway between the public clinic and the plant clinic or dispensary. It is supported by joint contributions from employers and employees.

Related Work.

Other institutions as well as individual workers are doing work of more or less value along the line of industrial medical research and treatment. Many clinics established for the treatment of special classes of diseases have a very close relation to some phases of industrial medicine, notably the Cardiac Clinic which was started at the Central Free Dispensary, Chicago,³ in 1918, and reestablished in March, 1919. Patients are referred to it from a number of different organizations, and much placement work is done through the Henry Favill School of Occupation. A vocational department in connection with this clinic is being discussed.

Medical Students and Industrial Medicine.

SUCH are the facilities which may be considered representative of the best that is offered for the study of industrial medicine and the training of industrial physicians in the United States. A few educational institutions besides those mentioned offer work which

³ The Cardiac Clinic of the Central Free Dispensary of Chicago, by Leo L. J. Hardt and Helen Beckley, in *Journal of the American Medical Association*, Chicago, Dec. 6, 1919, pp. 1792, 1793.

approximates the minimum afforded by the ones named. Still others are planning more extended work along this line than has so far been attempted by them, but are not ready to make their plans public. Even among those mentioned, however, very few are giving any but the most general attention to the subject. Only a small proportion of the clinics or hospitals specializing on the treatment of industrial accidents and diseases are making a special study of diseases in their relation to occupational conditions.

That this apparent ignoring of the importance of industrial medicine is not due to any lack of public interest in general health conditions is argued by the multiplication in all parts of the country of clinics, dispensaries, and other means for safeguarding the public health and teaching general hygiene. Indeed, the country seems to be thoroughly aroused to the importance of conserving the public health, and partly awakened to a realization of the predominant rôle which preventive medicine must play in such work. But the extent to which preventive medicine is bound up with the conditions under which the workers do their work, the action of such conditions upon the physical and mental health of the workers, and the consequent reaction of the workers thus affected upon the community have apparently not yet made any strong appeal to the imagination or the sympathy of the public. The subject has not even made a claim, in any proportion to its importance, upon the attention of the medical profession.

The most plausible explanation of this latter fact lies in the slight encouragement which, in the past, has been given by educational authorities for the study of this branch of medicine. For no matter what degree of public or of other interest may be enlisted in the subject, the burden of practical accomplishment in industrial medicine rests with the medical profession. This view is stressed by authorities in the matter in replies received to the letters sent out by the Bureau. Dr. Emery R. Hayhurst, of the Ohio State University, says that the work included under the "rather new term 'industrial medicine'" does not seem to be attractive enough to the recent graduate medical students, and adds:

Our graduates [who have received the medical degree] seem all bound up with the idea of taking a year or two hospital work, and after that going into private practice. It has so far seemed impossible to instill the ideas of "mass" medicine in our medical [post-graduate] students. On the other hand, our university students [sociological and other nonmedical students] seem overenthusiastic about the whole concept of "mass" medicine, hygiene, and public health.

Nor are the undergraduate medical students, in his opinion, attracted to the subject, as evidenced by the fact that none are taking the elective courses offered by the university. Additional evidence of this apathy toward the subject on the part of medical students

is afforded by the failure of any students to enroll for the full course in industrial medicine offered this year by the University of Cincinnati, and by the small number of medical students enrolled in any of the elective courses in the subject offered by other institutions.

In this connection Dr. Hayhurst says:

This seems to be due to the fact that the curriculum specified by the Council on Medical Education of the American Medical Association, which is the standard for A-class medical colleges (to which some 78 of the existing 87 medical colleges in the country belong), is so filled with prescribed work as to allow little opportunity for undergraduate medical students to carry any electives. There is some question in my mind whether, in view of the socialization of medicine, the character of the prescribed work should not be modified by the Council on Medical Education so as to admit proportional training in medical sociology, medical economics, "mass" medicine, etc.

The result of the neglect of the subject by medical students is that industries are employing persons for industrial medical service who, it is said by industrial medical specialists, are not trained or especially qualified for the work, and who in consequence bring discredit upon such service. Dr. Hayhurst thinks the most urgent feature of the situation at present is that of ways and means of arousing the interest of educational institutions in the subject, and he suggests, as a possible help in meeting the demands of the time for industrial physicians, the establishment of scholarships and fellowships in industrial medicine so as to encourage medical students to enter this field.

Now that a few of the more prominent medical schools are offering special courses in industrial medicine, and others are providing better facilities than formerly for training physicians along this line, there is ground for hope that a new interest may soon replace the apathy which has been displayed towards "mass" medicine by medical students. This hope gains its strongest force from the demand which is growing for the employment of well-equipped and socially minded men as physicians in industrial plants.

Protection of Sand Blasters Against the Dust Hazard.

THAT a type of installation has been found which is adequate to safeguard the worker in a sand-blasting cabinet against the dust hazard incident to his employment is the belief expressed by Dr. C.-E. A. Winslow and others in the report of an investigation conducted by them for the United States Public Health Service and described in Public Health Reports for March 5, 1920 (pp. 518-534).

The investigation was made in connection with problems that had arisen in the sand-blasting department of a large automobile factory in Connecticut, and the Palmer water-spray apparatus which the authors had found satisfactory in previous investigations was used. The immediate object of the investigation was "to determine the efficacy of the respirator and helmet used in the plant under observation, and if it was found, as was to be expected, inadequate, to determine the modifications in construction or operation necessary to secure a satisfactory degree of protection."

The dust problem in sand blasting is first discussed as follows:

In most industrial plants the protection of the worker against the hazard of industrial dusts can be best accomplished by keeping the dust content of the air of the workroom itself down to a reasonable level. The control of the dust in the workroom air is effected, in such cases, either by substituting wet processes for dry grinding procedures and the like, by carrying on dust-producing operations in inclosed spaces, or by equipping such devices as emery wheels and buffing wheels with exhaust hoods and suction fans. The success which may be attained by the last of these three means was discussed in a paper published in Public Health Reports for March 7, 1919 (pp. 427-449).

In other industrial processes, as in certain packing operations, in marble and granite working, and in the sand blasting of large castings, it is impossible to render the general air of the work place sufficiently free from dust to avoid danger of injury to the respiratory tract of the worker. In such cases as this, protection against the dust hazard can only be attained by the wearing of helmets, masks, or respirators, which will either filter out the dust particles from the air before it is drawn into the respiratory tract, or exclude the surrounding air more or less completely from the nose and mouth and supply pure air for breathing from some other source. It is difficult to accomplish these ends without interfering seriously with the comfort of the person wearing the helmet or respirator. A large number of devices designed to protect the worker against dust are on the market, but the discomfort produced in practice prevents the use of many of them; while those of simpler construction, which are less objectionable to the worker, are frequently of more than doubtful efficiency.

It seems essential as a prerequisite for the standardization of protective measures in this field to determine first what results may be actually accomplished in the way of dust control by different types of masks, helmets, and respirators, and then to weigh carefully the efficiency of each piece of apparatus as balanced against the discomfort which may reasonably be expected to militate against its actual use.

The report then considers briefly the previous studies made of the efficiency of helmets and respirators designed for the protection of the workers in dusty trades, describes in detail the installation and methods employed in the present study and the results of the present study, and gives a summary and practical conclusions in regard to the protection of sand-blast operators.

Recommendations.

IN CONCLUSION the report recommends that where the nature of the operation is such as to require the presence of workers within the sand-blasting cabinets of the types studied, all such

workers should be protected by helmets provided with positive air pressure and with respirators of the general type described. It is believed that under such conditions substantially complete protection will be secured.

In regard to the amount of air to be supplied to the helmet in practice the report states that in the tests on the average somewhat less than 3 cubic feet per minute were used, while the Palmer apparatus was constantly removing 2 cubic feet per minute. "In other words, the pressure at the front window of the helmet was produced by an excess of air supply over air exhaust through the Palmer apparatus of less than 1 cubic foot per minute." This suggested that in practice it would only be necessary to maintain a corresponding excess of air supply over the amount withdrawn from the helmet during inspiration.

Assuming that for the type of physical effort required in sand blasting each inspiration removes 90 cubic inches of air in a period of 1.5 seconds the draft upon the air in the helmet, during the inspiration period, would be at the rate of approximately 2 cubic feet per minute. A gross air supply to the helmet of 2.5 to 3 cubic feet per minute should therefore prove ample to maintain satisfactory conditions in practice.

The solution of the odor problem appears to have proved comparatively simple. It was found that only when large quantities of air were allowed to enter the helmet was the odor of oil noticeable, and that with the air supply to the helmet reduced to 3 cubic feet per minute it was impossible to detect any odor in the air supplied. If trouble of this kind should be experienced, the report adds, there are on the market simple and inexpensive air filters which may be placed in the air line to remove any impurities present. An experiment was made with one such filtering device, and it was found that the helmet supplied with air passed through this filter could be worn for over half an hour without the slightest inconvenience due to odor. It is stated that on actual test an amount of oil which would equal two or three drops collected in the filter during such a period. In order to avoid possible complaints the inclusion of such a filter in the air would seem to be desirable. The use of a small impeller type blower, which does not use lubricating oil internally for the fresh-air supply, would, of course, solve this difficulty completely, according to the report.

The introduction of $2\frac{1}{2}$ to 3 cubic feet of air per minute through a $\frac{1}{4}$ -inch hole at the top of the helmet would produce an uncomfortable draft on the top of the uncovered head, particularly in cold weather. The operators in using the apparatus as recommended by us wore their caps and in testing it ourselves we placed a folded handkerchief on the top of the head. It would seem desirable, however, to construct the helmet with a deflector plate under the air inlet so as to distribute the air more evenly and avoid the necessity for other protection. It would also be well to provide an air chamber equipped with a small heating coil to temper the incoming air in cold weather.

Finally, there are a few minor points in construction which will contribute materially to the success of such protective devices as those described. The tubing connecting the air line to the helmet should be of light weight so as to avoid a drag on the head of the operator, and it should be connected to the supply pipe overhead and near the center of the chamber so that its length may be as short as possible. We would recommend that about 2 feet of the tubing should be permanently connected to the helmet and equipped with a connecting joint (which might be merely a 2-inch section of brass tubing) so that the worker could enter the chamber fully equipped and make his air-line connection without removing his helmet. It would seem advisable to provide no air valve within reach of the worker, but to keep the air control under the supervision of the foreman. The air valve should be set to deliver 2.5 to 3.0 cubic feet of air per minute, and this air supply should be continuously maintained during working hours. The additional cost required to maintain a continuous air supply would be a minor item compared with the danger arising should individual workers fail to turn on the air supply.

INDUSTRIAL ACCIDENTS.

Hours of Work as Related to Output and Accident Rate.

IN 1917, when the question of output was of paramount importance, the Public Health Service, in conjunction with the committee on industrial fatigue of the Council of National Defense, and the committee on fatigue in industrial pursuits of the National Research Council, began an investigation of the effects of certain industrial conditions on output, especially the influence of fatigue, as shown by the relative production under different working hours when other conditions were reasonably similar. The close of the war did away with the particular motive which had led to the undertaking, but did not diminish in the least the need for information as to the effect, both on output and on worker, of different conditions of employment, so the investigation was continued and enlarged. The first report of its findings, giving the conclusions reached as to output and incidence of accidents under different schedules of hours, together with some related factors, is about to appear.¹ The scope of the work is shown in the following paragraph:

"The present report deals primarily with the study of two objective tests of working capacity among factory employees, working under normal factory conditions, namely, the variations in actual hourly output and the variations in hourly incidence of accidents in two factories working, respectively, under an 8-hour and 10-hour schedule. The difference in work at these two plants is further illustrated by a study of time lost at each factory, as shown by direct observation and by records of power consumption. An examination of labor turnover by departments at both plants furnishes statistical evidence of the relation of physical environment to the stability of the labor force. A study of recesses shows their effect on production. A preliminary statement of extended researches into the phenomenon of rhythm in industrial work now being carried on by Dr. P. S. Florence and Dr. A. H. Ryan closes the report."

The two plants chosen for investigation were engaged, one in the manufacture of munitions, the other in the manufacture of automobiles. The munition plant worked two shifts, the day shift being

¹ Treasury Department, United States Public Health Service. Studies in industrial fatigue: Fatigue in relation to working capacity. Comparison of an eight-hour plant and a ten-hour plant. Report by Josephine Goldmark and Mary D. Hopkins on an investigation by Philip Sargent Florence. Public Health Bulletin No. 106, February, 1920.

on duty from 7 a. m. to 12, and from 1 to 6 p. m., while the night shift worked full 12 hours, from 6.20 p. m. to 6.40 a. m., with a break of 20 minutes at midnight. The other plant worked three shifts of 8 hours each. Comparisons were made only for the day shifts, since in the 8-hour plant only 8 per cent of the force were in the night shift, and there were other differences which made it difficult to compare results fairly. In each plant certain repetitive processes, comparable with those selected in the other, and giving an output which could be counted or measured during the period of observation, were chosen, and repeated records were made of the output in each. For each process an average output for each hour of the working day was obtained, based on many single observations of each individual worker, and of many different workers, in order to obtain a result which should not be affected by the chance variations which might appear in the case of a single worker. This average having been secured, the maximum hourly production for each process was taken as the norm for that process, and the output of the other hours was expressed as a percentage of this. This method, which differs from the customary method of using the average hourly output as the norm, is defended on the following grounds:

Absolute output at the two plants can plainly not be compared. Different workers are employed; the processes, though comparable, are not the same; the product is diverse. Even the deviations from the average output at the two plants can not fairly be compared, as may be readily shown. In such an average the drop of a single hour, if great, may lower the general level so far as to make it wholly unrepresentative of the entire day's work, and thus prevent us from comparing the deviations hour by hour with similar deviations from a more representative average. This is the case at the 10-hour plant, where the depression of the average by the deep drop of the final hour to 80 invalidates a comparison of the hourly deviations with the wholly representative average of the 8-hour plant, which is based on hourly figures varying within narrow limits and a last hour falling only to 95.5.

Production Curves in Different Types of Operations.

THE output curve in general begins at something under its full height, works up within the second or third hour to a peak, and then declines, the last hour showing a considerable fall. The second spell of work follows the same general outline, though on a lower level. The operations studied were divided into four types—dexterous handwork, muscular handwork, lathe machine work, and miscellaneous machine work. These showed some interesting variations in their output curves. In both plants the dexterous handwork processes showed a pronounced tendency to reach their maximum output in the third hour; apparently a considerable amount of practice was required to get the workers into their full swing. After the lunch interval practice was again required to bring up the workers' efficiency, but by the second hour this was

accomplished, and in the 8-hour plant production then continued high until the last hour, when the customary drop occurred. In the 10-hour plant the afternoon level was relatively lower than in the 8-hour, and the drop of the final hour was far more pronounced.

The curve of output in the muscular handwork processes reaches its maximum earlier than is the case with the dexterous processes, and the fall begins sooner, and is more marked throughout the day than is the case with any other type. As the main requirement in this work is physical strength, fatigue shows itself more plainly than in types where dexterity is required, and the heavier the process the more marked is the effect of fatigue, as shown by the fall in output. The output of the first hour after lunch is in general larger than that of the second, showing the effect of the rest, the output not being affected by the loss in practice shown by the dexterous types. The afternoon fall is much greater and begins earlier than in the other types.

The curves of the two types of machine work differ from each other, but both are marked by a singular maintenance of output through the second spell of work, and a relatively slight decrease in the last hour. In one operation the output of the last hour is actually the highest of the day. It is pointed out that this does not necessarily mean that fatigue has not developed. In the case of the miscellaneous machine processes the output is governed to a large extent by the machine, and the fatigue of the operator has little effect on it. In the case of the lathe machine operations, the theory is put forth that fatigue is masked by the rhythmic nature of the work.

Comparative Output of the Two Plants.

IN EACH of the separate types of work the 8-hour plant showed a greater steadiness of production than the 10-hour, but to see how far this might be true for total output, the four types were combined, care being taken to eliminate operations which were not strictly comparable. Since in each type of work, and in each operation within the type, the hour of maximum production might vary from that of the next operation or type, the combination naturally does not show an index figure of 100 for any one hour. For the two plants the index figures of production are as follows:

INDEX NUMBERS OF HOURLY OUTPUT OF TWO PLANTS, SHOWING FALL FROM MAXIMUM.

Spell.	8-hour plant.				10-hour plant.				
	First hour.	Second hour.	Third hour.	Fourth hour.	First hour.	Second hour.	Third hour.	Fourth hour.	Fifth hour.
Morning spell.....	89.6	96.4	97.4	94.4	82.7	93.8	95.6	97.2	90.4
Afternoon spell.....	95.7	94.4	94.2	89.8	90.1	91.6	91.1	90.7	79.1

The disparity between the two sets of figures is striking. The lowest hourly output of the 8-hour plant differs by less than 10 point from the highest, while for the 10-hour plant the variation is not far from 20 points. The difference is noticeable not only in the first and last hour of each spell of work, but in the lower level of the entire second spell in the 10-hour plant. Summing up the situation, the authors declare that the outstanding feature of the 8-hour system is steady maintenance of output, while the outstanding feature of the 10-hour system is the decline of output.

Relation between Fatigue and Industrial Accidents.

THE report takes up, in considerable detail, the theories advanced to account for the customary accident curve. In this, accidents are uniformly low in the first hour of the working spell. They then rise gradually to a peak, most frequently in the penultimate hour of the spell, from which they gradually decline. In the second spell there is a generally similar rise and fall, often at a somewhat lower level. Speed of operation is admitted as an important cause of accidents, the exposure to risk increasing as the number of operations per hour or per minute rises. Fatigue has been advanced as an additional and important cause, but this theory has been attacked on the ground that in the final hours of the working spell, when fatigue should be at its height, the accident curve is falling. In this study, after making careful allowance for such items as lost time, change in work, and the like, which might interfere with the normal incidence of accidents, an index figure is worked out, showing the hourly accident rate per unit of output. This presents a striking contrast to the customary accident curve, for although in the latter hours of the spell or the day the accident rate declines, yet the rate per unit of production shows an increase. The main conclusions reached in this study of accidents are as follows:

- (a) In the absence of fatigue, accidents vary directly with speed of production, owing to increased exposure to risk.
- (b) The breaking up of this regular variation by fatigue is indicated by—
 - (1) The rise of accidents with the fall of output.
 - (2) The disproportionate rise of accidents with the rise of output, and the lack of a proportionate fall of accidents with the fall of output in the final hours of the day.
- (c) The importance of fatigue in the causation of accidents is emphasized by the fact that the higher accident risk accompanies the deeper decline of working capacity—
 - (1) In the second spell as compared with the first.
 - (2) In muscular work as compared with dexterous and machine work.
 - (3) At the 10-hour plant as compared with the 8-hour plant.
- (d) The level of the accident rate varies with the inexperience of the workers.

Other Factors Affecting Production.

IN BOTH plants a study was made of such matters as the amount of lost time, limitation upon output, and the like, which would affect output. The difference between the two in the matter of lost time was striking, being very evident in respect to time lost in beginning and ending work. This was checked up by a study of power consumption with the following results:

At the 8-hour plant 90 per cent of average power was maintained until 6 minutes, on the average, before the close of work; at the 10-hour plant more than 21.5 minutes before the close of work the percentage of average power had dropped below 90. In other words, work continued at the 8-hour plant practically under full power until 6 minutes before the end of the shift; at the other factory power began to decline three and one-half times as long before closing time—at exactly 5.30 p. m., when the investigators began afternoon readings, only 87 per cent of average power was in use in the entire building.

An investigation of time lost during the day showed even more striking differences. In both cases the workers were paid by the piece, so that voluntary loss of time was at their own cost. At the 8-hour plant, in two out of three operations studied, no time whatever was noted as voluntarily lost, and in the third, a particularly heavy and taxing operation, the voluntary loss was only $7\frac{1}{2}$ minutes. In the 10-hour plant in five operations studied the time lost voluntarily was, respectively, 5, 10, 30, 41, and 42 minutes. There was an evident relation between voluntary and involuntary loss of time; as the latter rose the former fell.

In each plant a certain amount of time was lost through faults of management, but apart from this there was a manifest tendency for the workers in the 8-hour plant to work to capacity, while in the 10-hour plant there was as manifest a tendency to work below capacity.

Another point of difference between the two plants was the prevalence of a limitation on output at the 10-hour plant. The investigators found that in many of the operations there seemed to be a tacit acceptance of some fixed quantity as a suitable output for the day, and this was rarely exceeded. If, however, some accidental delay or interruption made it likely that the worker, producing at his accustomed rate, would not reach this quantity, he could and did work at a very much faster rate until he felt assured of his output. It is not suggested that this spurt could have been maintained throughout the day, but there was considerable ground for believing that the actual output was decidedly below the potential output. At the 8-hour plant there was little, if any, evidence of this stereotyping of output.

This restriction of output can not be attributed to union practice, for the 10-hour plant has only a few union workers, nor can it be

attributed solely to faults of management. In part, it is thought, it may be due to the fear of the workers that if they exceed the customary output to any extent piece rates will be cut, so that they will have to work harder for the same or a smaller return. But this is not the most important reason.

The fundamental cause for limitation of output, however, lies deeper. No group of workers could continue, without physical disaster, to work at full capacity for a stretch of 12 hours at night or 10 hours in the daytime, not to mention the 3 hours overtime irregularly worked at the 10-hour plant. Low speed, wasted time, limited output are in large part the workers' automatic defense against exhaustion, against the overstrain of excessive hours of labor.

No attempt was made to compare the output of the night shift in the two plants, but a study was made of conditions and production of the night shift in the 10-hour plant. The most striking features were the sharp drop in production during the last two hours and the progressive slowing down, as the night wore on, in rate of production, as shown by the time required for a single operation. The voluntary loss of time due to sleeping, resting, eating, and so on was also noticeable.

The study of labor turnover led to the conclusion that it is directly associated with distasteful working conditions—such as long hours, low wages, and undesirable working conditions—and that it may be lowered by systematic effort to improve conditions and to fit workers to their jobs.

The report closes with a preliminary discussion of rhythm in industry, a topic which, it is explained, will be treated more fully in a future report.

WORKMEN'S COMPENSATION.

Recent Reports on Operation of Workmen's Compensation Laws.

Federal Employees' Compensation Commission.¹

THE third annual report of the commission charged with the administration of the law granting compensation to civil employees of the United States consists of two parts, the first statistical, covering the first 95 pages, and the second, decisions of the commission, pages 97 to 185. The act went into effect September 7, 1916, and the present report presents data through October, 1919, a period of 38 months. During that time final awards have been made in 29,772 cases, of which 613 were deaths, 18 permanent total disabilities, and 885 permanent partial disabilities. The number of claims received during the same period was 30,981, which was just about one-half of the number of the injuries reported (61,628). The number of compensable injuries as compared with the number reported is obviously much greater than under the average State law, and this may be explained in large part by the fact that compensation is payable for disabilities of over three days' duration. This appears from the report as to period of disability for 28,256 cases of temporary total disabilities reported, of which 5,401 caused disability of from 1 to 3 days; 6,718 from 4 to 7 days; and 6,267 from 8 to 14 days. Under this act only the first number, or 19.1 per cent of the total, would be eliminated, while under a law allowing a 7 days' waiting time 42.9 per cent would be excluded; a 2 weeks' waiting time, still found in many States, would eliminate 65.1 per cent.

One point which receives considerable attention in the report is the relation between compensation and the wages lost. The statute allows two-thirds of the wages as benefits, no wage in excess of \$100 per month to be considered. This limits the amount of compensation possible to \$66.67 per month as a maximum. The recent great advance in cost of living, and the rising wage rate in industrial employments, as in the arsenals and navy yards, make a wide gap between the income of the worker and his benefits during disability. Thus it was found that for temporary total disabilities but 44.1 per cent of the wage loss was paid in compensation, while for per-

¹ Third annual report of the United States Employees' Compensation Commission, July 1, 1918, to June 30, 1919. Washington, 1919. 185 pp.

manent partial disabilities the percentage is 58.8, making for all classes of disabilities 45.5 per cent of the wage loss repaid in compensation. It was recommended therefore that the law be amended so that compensation would be based on a maximum of \$150 per month and a minimum of \$75, thus permitting benefits ranging from \$50 to \$100, instead of from \$33.33 to \$66.67 as at present.

The number of injuries and duration of disability for tabulatable accidents, and awards for compensated cases, are shown separately for each department and important bureau or establishment. The number of cases of temporary total disability for the period of the existence of the law amounts to 28,256, with a total duration of 475,584 days, or an average of 17 days per case. The number of these cases compensated amounted to 15,374, awards for the same making a total of \$615,912, or an average of \$40.06 per case. A certain amount of annual leave is available to most employees, during which wages are continued. The amount of leave taken in compensated cases was 12,994 days, and disability absence of 366,061 days was involved in addition. In 2,798 cases no compensation was called for because the absence was covered by leave, while in 4,720 cases no claims were filed; 5,401 cases were of not over 3 days' duration.

The cost of medical treatment can not be determined in a manner comparable with State reports by reason of the fact that where available, Government medical officers and Government hospitals furnished at departmental expense the necessary aid and treatment for employees within their respective divisions of service.

The act compensates permanent partial disabilities on the basis of the actual wage loss, there being no schedule or fixed standards of benefits. This leads to a cessation of payments on account of injury when a workman returns to work after a mutilation if he is reinstated at his prior rate of wages, which results in a low rate of compensation for serious injuries in many cases. Thus in 23 cases of loss of eye, the average award was \$116.61; in 6 cases of loss of right hand, the compensation averaged \$175.05, while by some reversal of conditions 4 cases of loss of left hand averaged \$204.15 each. In 1 case a man returned to work after 76 days of absence with a loss of the right forearm and a compensation award of \$137.03—less than the amount for either a right or left hand, and only a little more than the average for 16 cases of loss of the right index finger at the proximal phalanx, for which the average benefit was \$116.40. Three cases of loss of thigh received average benefits of \$319.99, while 5 cases of loss of leg were disposed of by average awards of \$357.48. For a foot \$211.54 was paid and for a left arm at the shoulder \$42.47.

Under the provisions of the compensation act further claim may be made in any of these cases upon a showing of loss of wages because of the disability. Doubtless

such a right is of distinct value to a disabled employee, but many will not understand their rights clearly, and will fail to present to the commission claims which are perfectly legitimate. In many of these cases, therefore, no further compensation will ever be paid. The commission feels that a compensation act which permits the limit of compensation for a serious permanent disability at as low a rate as is shown in these cases is not adequate even though these employees should be able to continue at work at the same wage as at the time of injury. There is the loss of the right hand, which is a constant handicap to the employee, preventing him from improving his position and becoming a serious inconvenience in all the activities of life.

Detailed tables are given showing the nature of the injury by kind, location and effect, distribution by duration and extent of disability, cause of accident by extent of disability, number of dependents in case of death, nature of disability and amount of awards in permanent total disability, etc. This material, with its continued accumulation, will furnish valuable data for a study of accidents, their distribution, and results.

Maryland.²

THE fifth annual report of the Maryland Accident Commission shows a total of 46,875 industrial accidents reported during the year covered. This was in excess of the number reported in the preceding year by 4,305 accidents. These accidents gave rise to 4,377 claims for compensation, or somewhat less than 1 claim to each 10 accidents. There were 4,370 claims disposed of during the year, of which 173 were for death. Awards amounted to \$980,469 in compensable cases, including medical expenses in such cases, while an additional amount of \$188,997 was awarded as medical expenses in cases where no claim for compensation accrued. The aggregate total from the year's work of the commission was \$1,169,466.

The nature of the disabilities is set forth in a brief table showing that of the 4,377 claims submitted 183 were for death, 5 for permanent total disability, 415 for permanent partial disability, 4 for temporary partial disability, and 3,770 for temporary total disability. A schedule for permanent partial disability cases is embodied in the law, and 688 cases of this nature were disposed of during the year, including permanent loss of use of a member or part of a member as well as its dismemberment. Of the 265 cases of loss or loss of use of a member 53, or exactly one-fifth, were of the eye. The next highest number, 36, was of the first finger, while there were 35 of the fourth finger, 30 of the second finger, 23 of the third finger, and 22 of the thumb. Of the 423 injuries involving partial loss or loss of use, 109, or about one-fourth, affected the first finger, 98 the second, 66 the third, and 37 the fourth. Only 14 eye injuries come within this class.

² Fifth annual report of the State Industrial Accident Commission of Maryland, Nov. 1, 1918, to Oct. 31, 1919. Baltimore, Md., 1920. 27 pp.

There were 37 injuries to the feet, of which 19 involved total loss or loss of use and 18 had partial effect.

The number of contested cases was 577; 158 hearings were requested by the employer and 255 by the insurer; claimants asked for but 56, while 108 were held on motion of the commission. Of these, 340 were decided directly for the claimant and 175 directly against him, others resulting in mixed decisions or continuances. Appeals to courts were taken in 46 cases, one-half by the claimant and one-half by employer or insurer.

The total number of employers insured under the law is given as 9,031. There is a State accident fund which had at the beginning of the year 1,438 policies in force, and at the end 1,652. Net premiums written during the year amounted to \$193,882. Losses during the year amounted to 49 per cent of the premiums written and the expense of operation was 8.4 per cent. An adequate catastrophe fund has been developed and a liberal surplus and reserves are now on hand; it is claimed that, due to the rates charged and the services rendered, the fund offers an economical and satisfactory means of insuring employers, which fact is believed to be quite generally recognized.

Reference is made in the introductory statement to anticipated amendments to the law which were submitted to the legislature in a special communication. The report does not indicate what the proposed amendments were, and its publication preceded the meeting of the legislature. The amendments enacted have been reported by an officer of the commission showing the principal changes effected. These include better control of insurance companies and self-insurers, an extension of the act to include all work of an extrahazardous nature instead of extrahazardous employment only, an increase of the benefits from 50 to 66 $\frac{2}{3}$ per cent of the average weekly wages, with an \$18 maximum instead of \$12 and an \$8 minimum instead of \$5. The total maximum is advanced from \$4,250 to \$5,000 and medical expense from \$150 to \$300. The waiting time is reduced from two weeks to three days, and the employments formerly specifically exempted may now come under the act by election. Other changes involve compensation for disfigurement and the vesting of specific awards for permanent partial disability, so that they shall not terminate upon the death of the beneficiary during the compensation period. This does not exhaust the list of changes made, but does include the principal ones, and shows a very marked and satisfactory advance in the liberality of the law.

Virginia.

THE workmen's compensation law of Virginia came into effect January 1, 1919. A pamphlet presented as the first annual report of this commission³ really covers but nine months, the fiscal year ending September 30. Being the first report, it is taken up in part with an account of the preliminary work of organization and adoption of plans. Special attention is given to the question of insurance, particularly through the agency of reciprocal exchanges. The general insurance law of the State does not permit the operation of reciprocal exchanges, but the compensation act contains provisions that seem to contemplate their admission for compensation insurance. After a careful study of the subject the commission adopted regulations for the government of foreign mutual or reciprocal associations or exchanges, with which three exchanges have complied. The recommendation is made that the subject be given attention by the legislature, inasmuch as it is properly a matter to be supervised by the State commissioner of insurance rather than the industrial commission.

Self-insurance is permitted by the act, and is naturally availed of mainly by larger employers; 94 certificates have been granted, covering approximately 55,000 employees, or between 20 and 25 per cent of the total number of employees under the act. Twenty-five casualty companies are authorized to do business in the State, of which eight wrote approximately 70 per cent of all compensation business. The universal standard workmen's compensation policy, in use in about 20 States, was adopted as the standard policy for the State, though existing policies expiring not later than December 1, 1919, were permitted to continue by the attachment of an approved form of indorsement.

The act is elective, election being presumed where the employer has 11 or more employees. Farm labor, domestic service, and common carriers using steam as a motive power are excluded. The act is compulsory in its application to State and municipal employees without regard to their number. The records show 4,695 private employers with between 225,000 and 250,000 employees under the act. Only 35 employers, mostly small employers of labor, and 24 employees rejected the provisions of the act.

Compensation is paid on a basis of 50 per cent of the employees' wages. What this actually amounts to is shown by computations covering 10,776 nonfatal cases. Of these, 2,767 involved disability for longer than two weeks and were compensable. Two of these

³ First annual report of the Industrial Commission of Virginia for the year ending Sept. 30, 1919. Richmond, Va., 1920. 123 pp.

were cases of permanent total disability and received awards amounting to \$4,000 and \$3,980 respectively. The time loss for the 8,009 noncompensable cases was 51,874 days. At the average weekly wage the total time lost represented a wage loss of \$863,442. The compensation to be awarded, on an average basis, amounted to \$223,163 in addition to medical and hospital attention, or just above one-fourth of the amount lost by the worker.

Of 144 fatal accidents 88 had been disposed of, all but 3 leaving dependents. In 71 cases there were total dependents and in 14 partial dependents. The estimated value of awards in death cases with dependents made an average of \$2,221.

In commenting on the nine months' experience, the opinion is expressed that the law "has, without question, fulfilled the expectation of its supporters." Relief has been prompt and though moderate it has not been reduced by costs; while the removal of friction developed in suits for damages has "promoted community of spirit between employer and employee." The elimination of court costs and the relief of poverty are also factors to be considered.

Recommendations for changes in the law cover a simplification of the method of computing wages, and an amendment making the law applicable to employers of 5 or at most 7 workmen, instead of 11 as at present, as this number "deprives a great many employees of the benefits of the act and creates too much discrimination in certain classes of industries." As a matter of both justice and economy, medical aid should cover the whole period of disability, unless the commission found an earlier discontinuance fair and proper, instead of limiting it to 30 days. The waiting time should also be reduced from 14 days to 7. Other changes are also recommended, including the increasing of the burial allowances and the allowances where a father or mother or infant brothers or sisters survive as partial dependents of the deceased workman, compensation for a loss of use as well as for loss of a member, a full report of accidents, etc.

SOCIAL INSURANCE.

Report on Proposed Scheme for Mothers' Allowances in Ontario.

THE Department of Labor of the Province of Ontario has recently issued a report,¹ setting forth the results of an investigation into the problems which would be incident to the inauguration of a proposed scheme of mothers' allowances in Ontario, including the demand for such a system, the need of it, the extent of its application, an estimate of the cost involved, and the administrative problems which would have to be met.

The information for the report was gained through a study of the experience of jurisdictions in which mothers' allowance schemes are now working, from charitable and rural organizations, and from personal visitations.

A study of widowhood in Ontario was first undertaken, and statistics were compiled showing the actual number of widows with children under 16 years of age in the Province, on June 22, 1918. These statistics show the number of children in each family and their nationality. From representative districts names of 500 widows with children, exclusive of soldiers' widows, were chosen, 400 of whom were visited by special investigators and information secured as to the circumstances of the home. The aim of these investigations was to discover in how many instances the welfare of children was jeopardized by poverty and in what percentage of cases the Government would be justified in contributing toward the support of these children in order that they might be assured of adequate sustenance and home care.

Public hearings were held in four cities of the Province to give as widespread opportunity as possible for expression of public opinion. Opinion expressed at these hearings was uniform and positive in its statement of the need for a mothers' allowances act in Ontario.

It was found that there were 16,048 widows in Ontario with a total of 31,223 children. Of the 400 representative families visited it was found that there were 80 needy widows and 224 needy children. By proportionate computation it was estimated that there are 3,210 needy widows, exclusive of soldiers' widows, and 8,987 needy children under 16 years of age in the Province.

¹ Ontario. Department of Labor. Mothers' Allowance; an Investigation. Toronto, 1920. 126 pp.

The average cost of maintaining these children in institutions, based on the report of the inspector of public charities, would be \$1,078,440 per year.

Based on the comparison with the cost of mothers' allowances in 11 States of the United States, by number of children benefiting, the cost of such a scheme for Ontario would be \$817,000. Based on comparison with the expenditure of Manitoba for the same purpose, by number of children benefiting, the cost for Ontario would be \$1,027,064.

This estimate includes provisions for widows only. The report discusses the advisability of including in the proposed act for Ontario wives of the incarcerated insane, of the permanently incapacitated, wives of prisoners in penal institutions, deserted wives, and unmarried mothers. Estimates are made of the additional cost of including such cases. Estimates of the cost of such a system, in case one-child families and children over 14 years of age are excluded, are also made.

Mothers' aid laws operating in the Canadian Provinces are reprinted in an appendix to the report.

LABOR LAWS AND REGULATIONS.

German Works Council Law.¹

Origin of the Works' Councils.

THE works council law, passed on January 18, 1920, by the German National Assembly, has been called the "acid test" for the new German Government. This Government, being revolutionary and socialist, started forth with the most honest intentions of socializing industry; perhaps not all industry and perhaps not all at once, but nevertheless the "socialization of the means of production" (to use the old Marxian phrase) was to replace the capitalistic order. Bit by bit the program of socialization has been abandoned; first, because the German Government, which is strongly anti-Bolshevik, was frankly terrified at the results of the socialization of industry as reported from Bolshevik Russia and Bolshevik Hungary, and second, because the industrial state of the country seemed to the Government so entirely abnormal and so extremely unpromising that it did not venture to embark on any big industrial schemes which would in all probability be foredoomed. Yet for 60 years the German socialists had talked socialization. With the advent of revolution no power on earth could prevent a renewed outburst of scheming, planning, and contriving as to the best methods of socialization. Some of these schemes are very interesting; only a few of them have been realized, and one of these few is the works council law.

A discussion of the law may be preceded by a few remarks on the origin of the works councils. As is well known, at the outbreak of the revolution there were formed in the big German industrial and commercial concerns workers' councils (*Arbeiterräte*) which bore an essentially political character. They set themselves the task of converting society from its old institutions into new forms, and their work seems indeed to have been very useful in many instances. But when, after the revolution, the new régime had established itself and the task of the workers' councils was thus accomplished, these councils were not very much inclined to dissolve. The reason

¹ This article is based on the following sources: Deutsche Nationalversammlung 1919-20, 140th session, Jan. 18, 1920; Deutsche Nationalversammlung 1920, No. 2028, Entwurf eines Betriebsrätegesetzes; German Works' Council Law, by Miss L. N. Matthaei, Welfare Work, London, March, 1920, p. 35; The German Works' Council Bill, The Nation, New York, Jan. 31, 1920, p. 157; Workmen's shop councils in Germany, U. S. Bureau of Foreign and Domestic Commerce, Commerce Reports No. 294, Washington, Dec. 16, 1920, pp. 1540-1544.

See also "German Workers' Councils—Their Organization and Functions," in MONTHLY LABOR REVIEW, September, 1919, pp. 125-133.

was not far to seek. The councils had not limited themselves to the field of politics, but were active upon economic grounds as well. They had stood before the employers as the representatives of the workers, and in those tumultuous times which immediately followed the downfall of the old régime had often wrung important concessions from the frightened employers by means of "wild" (unauthorized) strikes.

These successes of the workers' councils turned the workers away from the tactics of the old trade-unions and created a strong distrust of the experienced union leaders. The German trade-unions have not let the revolution carry them away from the path which they have steadily followed for many years. In November, 1918, they had concluded a working agreement with the united employers' associations² whereby, among other things, the right was extended to the workers of a voice in the management of the business in which they were employed, as well as of the 8-hour day and other improvements in the conditions of labor. A large proportion of the workmen, however, were not content with these results obtained by peaceful means. They saw the opportunity opened to them by means of the workers' councils to turn to advantage the straits in which many employers found themselves and to introduce the most extraordinary demands. When they saw that the leaders of the trade-unions were not inclined to support them in their destructive policy, opposition arose to the old line and conservative organizations. The latter had achieved their task and could vanish from the scene; the workers' councils were to take over their prerogatives.

Even when the Government itself decided that the workers' councils had become superfluous now that normal conditions were more nearly restored, it soon became evident that they could not be reduced to their former place. It was when enthusiasm for a socialization program was somewhat waning, and the Government was being pushed into a conservative position, that *Vorwärts*, the leading socialist paper, declared that the works council law should be the acid test; if the Government were to give way on this last point, then it might as well save itself the trouble of calling itself socialistic at all.

Yet the Government, for all its good will, might have been forced to give way had not the workers taken precautions. In the spring of 1919 they bound the Government by a kind of signed contract to certain fundamental principles. The Government issued a statement which assured the continuance of the workers' councils. The statement was as follows: "The workers' councils are fundamentally recognized as representatives of economic interests and are grounded on

² See MONTHLY LABOR REVIEW, April, 1919, pp. 158-160.

the constitution." The curious thing about this guaranty is that it was hastily given before the rest of the constitution had been even discussed. Afterwards it was embodied, somewhat enlarged, as article 165 of the new German constitution.⁸ This article embodies two basic principles: Absolute equality of representation as between employers and employed on all industrial bodies of whatsoever kind, from the top to the bottom of industry, to be established as an inviolable constitutional principle. This is really a kind of base-defense line; if hard pressed the workers could always fall back on it; protected by entire parity of representation on all joint bodies, they could not be ousted from all their positions in industry. The worker is to be treated no longer as a mere cog in the machine, but is to be recognized as an active and conscious agent of production, endowed with the power to offer or withhold his cooperation in making the productive system work.

The constitutional principles are sometimes the most shadowy of safeguards, and the workers had the prudence to bargain for certain definite machinery as well. This machinery has an apex, a middle, and a base. The apex, the national workers' council (*Reichsarbeitserrat*) is to be a "chamber of labor," i. e., a great parliament of all workers called together to advise the country in a professional capacity on industrial and social legislation. The middle is to be a system of district workers' councils (*Bezirksarbeiterräte*), feeders to the national council; but the foundation is to be the works council (*Betriebsarbeiterrat*), i. e., councils in the individual establishments, the worker in the factory itself, so to say.

The system, then, is to be worked from the inside outward. First, the worker is to establish himself as a controlling agent in his own factory, and then to advance to organize national production. No one is as yet troubling much about the rights and duties of district councils or of the national workers council, though the Government is said to have worked out a complete scheme. It is too obvious that the first step of establishing control over the employer within the factory will be so stupendous a task as entirely to dwarf all others. Or, to put it this way: The great fight of the nineteenth century was for the protection of the workers; the great fight of the twentieth century will be for control by the workers, and it is this fight which has been inaugurated on the Continent by the German works' council law.

Terms of the Law.

THE works' council bill as originally submitted to the National Assembly was composed of 56 articles. Its first formal reading in the assembly took place on August 21, 1919, its first reading in

⁸ A translation of the sociopolitical provisions of the new German constitution may be found in the MONTHLY LABOR REVIEW of December, 1919, pp. 132-135.

committee November 28, 1919. It was discussed by the committee in 43 meetings, lasting seven weeks, 127 amendments being brought in. As passed on January 18, 1920, after its third reading, the law contains 106 articles. Lack of space does not permit printing the text of the law in the MONTHLY LABOR REVIEW. Briefly summarized, its provisions are as follows:

Establishment, election, and composition of works councils.—Works councils (*Betriebsräte*) are to be elected in all establishments employing 20 or more persons, whether manual workers or salaried employees. In establishments employing less than 20 but at least 5 persons a single shop steward (*Betriebsobmann*) is to be elected in place of a works council. The law is applicable also to agriculture and to home workers. A special law is to regulate the establishment of workers' representation in ocean and inland navigation. (The efforts of the reactionary employers to omit agriculture and all small industrial establishments were defeated.)

In establishments employing less than 50 persons the works' council is to consist of 3 members, in those employing 50 to 99 persons, of 5 members, and in those employing 100 to 199 persons, of 6 members; after that the membership of the works council is increased by one member for each 200 employees in establishments employing 200 to 999 persons, for each 500 employees in establishments employing 1,000 to 5,999 persons, and for each 1,000 employees in establishments employing 6,000 or more persons. The maximum membership of a council is limited to 30 members. If in a single commune, or in two or more economically interdependent communes, there are several similar or economically interdependent establishments owned by the same firm, then, by unanimous resolution passed by all the individual works councils, a central works council (*Gesamtbetriebsrat*) may be formed in addition to the individual works councils. Under the same conditions there may also be formed a joint works council (*Gemeinsamer Betriebsrat*), which takes the place of the individual works councils.

The manual workers (*Arbeiter*) and the salaried employees (*Angestellte*)—this careful distinction between manual and nonmanual workers runs through the entire law—elect separately members of the works council by secret ballot and from their own midst. The works council is to safeguard the common economic interests of both manual workers and salaried employees as against the employer. In addition to the works council, there are to be formed in each establishment a workers' council (*Arbeiterrat*) and a salaried employees' council (*Angestelltenrat*) to represent the special interests of each of these two groups of employees. The members of the works council elected by the manual workers form the workers' council and the

members elected by the salaried employees form the salaried employees' council.

All manual and nonmanual workers, without distinction of sex, who are over 18 years of age and in possession of their civic rights have the right to vote at the election of works councils. Eligible to the works councils are all persons entitled to vote who are German citizens over 24 years of age, have finished their vocational training, and on election day have worked at least six months in the establishment and at least three years in the trade or occupation in which they are engaged. Members of the works council are elected for a term of one year. Their reelection is permissible.

Meetings of the council.—The works council, if composed of less than 9 members, elects from among its members a chairman and a vice chairman. If composed of more than 9 members, it elects from among its members an executive committee of 5 members. The chairman of the works council represents the council before the employer and before the arbitration board; he also calls the meetings of the council and determines the agenda. On request of at least one-fourth of the members of the council or on request of the employer a meeting must be called by the chairman. The employer has the right to be present at meetings called on his request, and he may also be invited to be present at other meetings. The meetings of the council shall, as a rule, take place outside of working hours, and are not open to the public. Every meeting which is to take place during working hours shall be reported to the employer. A resolution of the works council is valid only if all the members have been requested to attend the meeting, have been informed of the questions to be discussed, and if the number of members present is equal to half the number of members of the council. Members of the works council and their alternates are to exercise their office without compensation. Necessary loss of time due to attendance of meetings of the council shall not entail reduction in wages or salary. The necessary costs of management of the works' council are to be borne by the employer, unless otherwise provided by collective agreement. He must put at the disposal of the council the rooms and equipment necessary for the holding of its meetings and the transaction of its business.

Termination of membership.—Membership in a works council comes to an end when any member resigns, ceases to be employed in the establishment for which the council has been formed, or loses his qualification for election. On the proposal of the employer or of at least one-fourth of the workers entitled to vote, the district economic council, or, as long as such a council does not exist, the conciliation board may decide that any member guilty of gross neglect of his civic duties shall cease to be a member of the works council.

Under the same conditions the district economic council or the conciliation committee may dissolve the works council.

The works assembly.—The law also provides for a works assembly (*Betriebsversammlung*) composed of all the manual and nonmanual workers of the establishment. This assembly really stands in authority above the works council, for on demand of the employer or of at least one-fourth of the workers entitled to vote the chairman of the works council must convene the works assembly, and, as has been said above, a minority of only one-fourth of the workers entitled to vote may bring in a motion that the district economic council dissolve the works council. The works assembly can make demands and proposals to the works council. Separate works assemblies may be held by the manual workers and by the nonmanual workers. The employer has the right to be present or to be represented at works assemblies and to take part in the proceedings, but can not vote. Meetings of the works assembly shall as a rule take place outside working hours; if this rule is departed from in urgent cases, the consent of the employer must be obtained.

Trade-union representation.—In the preceding pages it has been stated that the movement toward works councils proceeded particularly from those who were opposed to the conservatism of the trade-unions. Is it the endeavor of the present law to make the trade-unions superfluous and to have their tasks taken over by the new system of works councils? The provisions of the law make it evident that this is in no sense the case. Article 8 seems to permit no misunderstanding on this point; it says: "The right of the economic organizations of manual workers and salaried employees to represent the interests of their members is in no way prejudiced by the provisions of this law." The law, however, does not stop at this declaration; it is evident from a number of its provisions that there is no intention of driving the trade-unions from their chosen field of activity. Article 31, for instance, provides that on motion of one-fourth of the members of a works council one representative each of the economic organizations represented in the council shall be admitted to the meetings in an advisory capacity. The same right, to be sure, is granted to the employer, who may demand that representatives of the economic organizations to which he belongs shall be admitted to the meetings of the council in an advisory capacity. Articles 66 and 78, prescribing the duties of works councils and of the group councils of manual workers and salaried employees, provide that they shall see to the fulfillment of the collective agreements concluded by the trade-unions, and that if such agreements do not exist they shall cooperate in the establishment of wage and working conditions in deliberation with the economic organizations of employees that may be concerned therein. Finally—and this is the farthest step of all—article 62

provides that if in a collective agreement declared by the Government to be binding on a whole industry, a method of representation for the employees is adopted different from that introduced by the present law, the works councils provided by the law shall not be introduced in that industry; and if they already function in that industry, they are to be dissolved.

It is evident from all these quotations that the Government has desired workmen's councils only in addition to and cooperating with the trade-unions, and this is no wonder, for the socialistic members of the Government are recruited, for the most important part, from the leaders of the modern German trade-union movement.

Duties of the works councils.—The law assigns to the works councils the following duties:

1. In establishments with economic (commercial or industrial) aims to support the management with advice in order to assist it to bring the establishment to the highest possible state of efficiency.
2. To cooperate in the introduction of new labor methods.
3. To safeguard the establishment from violent disturbances, and, without prejudice to the rights of economic organizations of manual workers and salaried employees, to invoke the conciliation committee or some other conciliation or arbitration board agreed upon in case of disputes between the works council, the workers, or a part of the workers, and the employer which can not be settled by agreement.
4. To see to it that awards made by a conciliation or arbitration board in matters concerning the entire establishment and accepted by the interested parties be carried out.
5. To fix, in agreement with the employer, general shop regulations and any modifications of the same within the terms of collective agreements then in force.
6. To promote harmony among the workers and between them and the employer and to safeguard the workers' right of combination.
7. To receive complaints of the workers' and salaried employees' council and to dispose of them in agreement with the employer.
8. To take measures to combat danger to health and accidents in the establishment; support the factory inspectors and other officials in the task of combating these dangers by information, advice, and calling them in when necessary, and by supervising the carrying out of the orders of the industrial authorities and of the provisions for the prevention of accidents.
9. To take part in the administration of pension funds, company-owned workmen's dwellings, and other welfare institutions of the establishment.

The duties enumerated under 1 and 2 are not applicable to councils in establishments with political, trade-union, military, scientific, artistic, and similar aims.

In the exercise of its duties the works council must see to it that the workers as well as the employer abstain from making demands or taking measures which are apt to injure the common interests. The carrying out of resolutions adopted conjointly with the management of the establishment is to be effected by the management. The works council is prohibited from interfering with the management by making arrangements independently.

Duties of the group councils (workers' and salaried employees' councils).—The duties assigned by the law to the group councils, that is, to the workers' council and the salaried employees' council, are essentially the same as those assigned to the works council which represents the entire personnel, with the sole distinction that the group council can discuss or act only in matters concerning the group represented by it. In addition to the duties which the group council has in common with the works council it shall—

1. In so far as no regulation by collective agreement exists, in conjunction with the economic organizations of the workers or salaried employees, cooperate in the fixing of wages and other working conditions, especially in the fixing of piece rates or the bases for fixing such rates; in the introduction of new methods of payment; in the fixing of working hours, especially in extensions or reductions of the regular working hours; in fixing the annual leave of the workers, and in arranging conditions of apprenticeship;

2. See to it that war invalids and persons injured through accidents shall obtain employment suitable to their physical and mental ability and intervene in this sense with the employer and fellow workers in the establishment;

3. Cooperate with the employer in establishing rules for the hiring and discharging of workers and employees.

Control by the workers.—The most disputed provisions of the bill concerned the participation of the works councils in the management of the establishment and their right to interfere in the hiring and discharging of employees. These provisions were the crux of the law.

As has already been stated here, the works council has the right to "support the management with advice," with the object of increasing output, and to "cooperate in the introduction of new labor methods."

In undertakings in which there is a board of directors the works council has the right to delegate one or two of its members to that board who shall represent the interests and demands of the employees as well as their views and wishes concerning the organization of the establishment. These delegates of the works council have a seat and vote in the board of directors but do not draw directors' fees. They are under obligation to maintain secrecy with respect to confidential information given to them.

In an undertaking which is obliged to keep books and which employs as a rule at least 300 workers or 50 salaried employees the works council may request that, beginning with January 1, 1921, a balance sheet and profit and loss account for the past financial year be submitted to the executive committee of the council, or, in the absence of such a committee, to the council itself six months after the close of the financial year, at the latest. In this case also the council must maintain secrecy with respect to information of a confidential character.

The rights of the works councils described in the two preceding paragraphs are somewhat limited by the provision of the law that establishments of the two classes specified may on their request be exempted by the National Government from granting these rights if important State interests require it.

In order that the works council may fulfill its duties it has in all establishments with economic aims the right to request the employer to give to the executive committee, or, where such a committee does not exist, to the council itself, information as to all the transactions of the establishment which affect the labor contract and the work of the employees. In particular the employer shall on request show the wage sheets and make a quarterly report as to the condition and output of the establishment and the expected demand for labor. This information is to be considered confidential.

The employers' associations strongly opposed granting to the works councils an insight into the financial affairs of industrial establishments. But the concessions made by the law to the workers are not of great value. It is true the works councils are given representation on the board of directors of stock companies, and in other concerns they are entitled to receive an annual balance sheet and a copy of the profit and loss account, but, as secrecy must be maintained on all information obtained in this manner, the councils can not report back to the workers. This provision of secrecy was attacked by both socialist groups, but they were unsuccessful in the National Assembly. The council may inspect wage sheets but none of the books, or, in other words, it can not get a real grip on the finances of the establishment.

On the equally vexed question of hiring and discharging, the workers have lost in committee the right, as originally suggested, of cooperating by means of a confidential delegate in the engagement of workers, but retain a modified right to be heard as to dismissals, namely, as to dismissals for political, military, religious, or trade-union activities, or where no reasons have been given for discharge, or where unjustifiable dismissal has taken place not occasioned by the conduct of the employee or by the state of the business, or where dismissal has taken place because the worker refused to perform other work than that contractually agreed upon on his engagement. In such cases the employee may appeal to the workers' or salaried employees' council, which, after investigation may negotiate with the employer. If no agreement is reached the case goes to the arbitration board, whose decision is final.

Protective and penal provisions.—The law prohibits the employer and his representatives from interfering with their workers in their right of electing members to the works councils or in the acceptance of membership on such a council and exercise of its functions or from

discriminating against them for this reason. Before giving notice of discharge to a member of a works' council or before transferring him to another establishment the employer must obtain the consent of the works council, unless the discharge is due to a legal obligation or one arising out of a collective agreement or an award of a conciliation or arbitration board, or is given without notice for adequate reasons which are justifiable under the law dealing with the termination of labor contracts without notice. Employers or their representatives who contravene these provisions or fail to furnish to the works' council the business information prescribed by the law are liable to a fine up to 2,000 marks (\$476, par) or imprisonment. If an employer, or his representatives, willfully suppresses facts or gives false information to the works council in submitting data to it concerning the financial condition of the establishment he becomes liable to imprisonment up to one year or a fine up to 10,000 marks (\$2,380, par) or both.

Transitional provisions.—The law authorizes the national minister of labor to issue, with the consent of the Reichstag and of a committee consisting of 28 members of the latter, regulations for the carrying out of its provisions. The law comes into force on its promulgation, and within six weeks after its coming into force a works' council must be elected in each establishment. After the election of a works council all workers' councils and workers' and employees' committees existing in an establishment cease to function.

With the coming into force of the works council law a number of contradictory provisions in other laws and in the Industrial Code are abrogated.

New Regulation of Unemployment Relief in Germany.

A NEW order regulating unemployment relief was published in Germany on January 26 of this year.¹ It came into force on February 1 and contains the following provisions:

The cost of the unemployment relief is to be borne, one-half by the nation, one-third by the Federal State, and one-sixth by the commune or communal union. In the case of poor communes the grant from the nation may be increased. The commune obligated to grant relief is that in which the person entitled to relief was residing when the period of unemployment began. Unemployed persons who since August 1, 1914, have moved to another locality are as far as possible to return to the district where they lived at

¹ Kölnische Zeitung. Cologne, Feb. 2, 1920. Noon edition.

that date. Relief will not be granted to them in any other district for longer than four weeks. Communes and communal unions are ordered to refuse relief to any person who declines an offer of work, even though it lie outside his usual occupation and place of residence, if it is within his physical capacity.

The districts of Germany have been classified under A, B, C, D, and E, in accordance with the average daily earnings of day laborers in the various localities as established by the sick funds, and different maximum relief rates have been fixed for these classes. These rates are the following:

MAXIMUM UNEMPLOYMENT RELIEF RATES IN GERMANY, EFFECTIVE FEBRUARY 1, 1920.

[Par value of the mark is 23.8 cents.]

Item.	Maximum rates per day in districts of class—			
	A.	B.	C.	D and E.
	Marks.	Marks.	Marks.	Marks.
Males over 21.....	6.00	5.00	4.00	3.50
Males under 21.....	4.25	3.50	3.00	2.50
Females over 21, not members of another person's household.....	5.00	4.50	3.50	3.00
Females over 21, members of another person's household.....	4.25	3.50	3.00	2.50
Females under 21.....	3.00	2.50	2.25	2.00
Family allowances: ¹				
Wife.....	2.50	2.25	2.00	1.75
Each child and other dependent.....	1.75	1.75	1.50	1.25

¹ The total relief granted to an unemployed man for his family may not exceed 1½ times the amount granted to himself.

Proposed Labor Law of Switzerland.¹

THE Swiss Federal Assembly promulgated an act on June 27, 1919, providing for the establishment of (1) a Federal labor department in the ministry of economics, (2) a Federal wage commission, and (3) Federal wage boards. Subsequent to the passing of this measure the demand was made that it should be submitted to the referendum; the requisite number of signatures was obtained, and it is now announced² that the act will be put to the popular vote upon a date to be fixed later.³ Meanwhile a summary of the leading principles of the act may be of interest.

A labor department is to be established for the purpose of studying labor conditions in "home industries," factories, workshops, mines, etc., arts and crafts, and commerce. Its functions are: To inquire into labor conditions in general, the labor market, the standard of living and housing conditions of workers, and migration of

¹ Extracted from the Labour Gazette, London, January, 1920, p. 11. Data taken from Feuille Fédérale Suisse, July 2, 1919.

² Feuille Fédérale Suisse, Dec. 24, 1919.

³ The Bureau has been advised by the Swiss Legation that the referendum, which was held on Mar. 21, 1920, resulted in rejection of the proposed labor law by a vote of 252,662 to 252,243.

labor; to prepare schemes for improving working conditions and raising the standard of living of workers; to give effect to the decisions of the Federal wage commission; to decide in cases of appeal relating to the nonobservance of legally established working conditions; to express an opinion, at the request of the Federal Council, on proposals put forward by the wage commission and the wage boards; to formulate proposals regarding "common rule" declarations for collective agreements covering groups of workers for whom no wage boards exist, and proposals connected with the question of permitting different types of agreements; and to supervise the administration of the wage boards.

The labor department is also empowered to institute inquiries, to examine pay sheets, and to interview heads of firms and members of the staff, all of whom are bound to supply the information desired. It may demand the assistance of cantonal and communal authorities, public labor exchanges, statistical offices, and the employment exchanges of the trade organizations concerned. These powers are also granted to the wage boards.

A wage commission and wage boards are established for the purpose of regulating wages and collaborating with the labor department in the tasks which devolve upon it.

The Federal wage commission is empowered to decide appeals against wage rates fixed by the wage boards; to lay proposals before the Federal Council relative to "common rule" declarations and standard agreements; and to give advice, at the request of the labor department, on matters which come within the province of the latter. The wage commission is to consist of a president—this office being filled by the director of the labor department—two independent members, and at least three representatives of employers and three representatives of employees. Women are to be "adequately" represented upon the commission. The members are appointed by the Federal Council for periods of three years. The trade organizations concerned are to be consulted in regard to nominations.

Wage Boards.

THE wage boards are commissioned to fix wages in cases submitted to them by the labor department; to carry out the instructions of the labor department; to supervise the observance of legal working conditions; to submit to the Federal wage commission proposals relative to "common rule" declarations and standard agreements; to give advice on questions submitted by the labor department; and to report on their activities to the labor department. A wage board will consist of an independent chairman, at least three representatives of employers and three representatives of the workers. Women

are to be "adequately" represented. The powers of the wage boards to fix wages are for the present restricted to the fixing of minimum rates of wages for workers employed in "home industries"; but the Federal Assembly may extend these powers, enabling the wage boards to regulate wages generally. For the purpose of dealing with the regulation of working conditions of nonmanual workers special wage boards, with representatives of such workers as members, will be set up. The wage boards are to be appointed by the Federal Council for periods of three years. The members are to be appointed upon nomination by the wage commission. There are to be wage boards for the various trade groups, and, when necessary, for certain districts or parts of the country. The trades concerned are to be consulted.

Wage rates are to be fixed after due consideration has been given to all circumstances, and, so far as possible, on the basis of equal pay for equal work, without distinction of sex. Wages may be graded according to local conditions, trade groups, or the capacity of the worker.

All requests for the fixing of wage rates must be addressed to the labor department, which shall transmit them to the competent wage board. After hearing the parties concerned and ascertaining all necessary facts the chairman of the board will endeavor to secure a unanimous decision by the board. If he succeeds, the wage rates fixed will be enforced immediately. If the board is not unanimous, the verdict of the majority shall be accepted. In this case any person concerned may enter an appeal against the decision. The appeal must be made within a period to be fixed by the wage board, but in any case not less than 10 days, to the wage commission through the medium of the labor department. If the fixed period expires without appeal having been made the decision shall enter into force. The decision of the wage commission in cases of appeal shall be final.

Provision for Drafting Standard Agreements.

IF THERE is a manifest need the Federal Council may, on the proposal of a wage board, after consulting the trade organizations concerned, make a "common rule" declaration for a collective agreement, and may draft standard agreements, from the provisions of which it shall not be permissible to depart. If such collective agreements and standard agreements specify rates of wages, the power to fix wages granted to the wage boards shall be replaced by the right to lay proposals before the Federal Council. Collective agreements in those trades for which no wage boards exist may be made subject to "common rule" declarations without any proposal being made by wage boards.

Applications made to the Federal Council for "common rule" declarations must be addressed to the labor department, which shall transmit them to the competent wage board after hearing the views of the trade organizations concerned. The opinion of the wage board shall be submitted to the wage commission, which shall decide whether or not the application shall be laid before the Federal Council. If the commission decide in the negative the matter shall not be proceeded with; if in the affirmative, the labor department shall express its opinion on the proposal to be submitted to the Federal Council. The labor department must ascertain that the proposal is not at variance with wage rates which may already have been fixed by wage boards.

Every decision involving the laying down of working conditions must be accompanied by a statement of the date on which the decision is to come into force and of the date after which a revision may be demanded. If a considerable change of circumstances should arise a demand may be made for a revision before the fixed date.

During the period when the question of regulating working conditions is being considered, and during the period of validity of orders and decisions, the parties concerned are bound under penalty of fine to avoid all disputes connected with the working conditions under consideration or which are the subject of orders or decisions.

Fines ranging from 10 to 500 francs [\$1.93 to \$96.50, par] are to be imposed for contravention of measures adopted by the labor department and wage boards to obtain information; for nonpayment of fixed wage rates, if payment is refused maliciously or in defiance of regulations; for contravention of regulations laid down in other acts for regulating working conditions; and for failure to observe the obligation to avoid disputes in the conditions stated above.

In case of need, and after consulting the cantonal governments, the Federal Council is to establish Federal conciliation boards, and to determine their methods of procedure and the relations between them and the cantonal and communal authorities.

HOUSING.

Company Housing in Anthracite Region of Pennsylvania.

By LEIFUR MAGNUSSON.

COAL was first commercially shipped from the Lehigh Valley of Pennsylvania in 1820; 365 tons constituted the shipment for the year. The anthracite region occupies an area of about 500 square miles in the northeastern part of Pennsylvania. The region being compact and having become densely populated by reason of the development of other industries both depending upon and contributing to the anthracite industry, the isolation of the anthracite mining town is at present not so great as that of other mining towns. Many of the present company-owned houses are now situated in populous cities like Scranton and Wilkes-Barre.

Scope of Survey.

THE Bureau's survey in the anthracite region covered 24 companies, employing altogether 116,208 men and operating 104 establishments or groups of mines. Taking those companies which reported the number housed it appears that they employ 90,608 men, and house 20,660, or 22.8 per cent, of their entire forces. The largest company supplying information employs approximately 22,000 men. One company employing 11,115 men houses only 2,400, or 21.6 per cent; and another employing 725 men houses only 76. The survey in the anthracite region included 6,853 dwellings.

The Anthracite Town.

THE anthracite town is almost always situated in close proximity to the mine and along any natural highway passing through the region. None has been scientifically planned and practically all are laid out in rectangular fashion.

The towns are almost all situated near larger cities, with which they are connected by rail or electric lines. Consequently they are not much more than groups of houses near the shafts and breakers; they are not complete towns in the sense of being self-sufficing, with stores and means of recreation. In that respect they are depending more and more upon the neighboring cities.

As a rule, no paved streets are provided in anthracite mining towns; and no paved alleys were observed by the investigators. Only a few communities of the 30 visited by the agents of the Bureau were reported as having a street paved with tarvia, macadam, or concrete. The principal street was frequently the principal township highway. Dirt roads, covered in some instances with coal-dust waste, are the rule. There is a general lack of care for alleys and roads, although a few notable exceptions are reported.

The streets are generally about 45 feet in width. In certain hillside towns the houses all face one way and no question as to street widths is involved. Alleys average about 17 or 18 feet in width.

There is no evidence of lot crowding in this region. Lots for each family in the semidetached houses range from 25 to 50 feet or even from 50 to 60 feet in width. For the single houses the width of the lots varies from 50 to 60 feet.

Early Housing Conditions.

THE early miner's house was of the double or semidetached type made of board and batten sides on the framing. A mere dugout served for a cellar. While the type still persists, the houses recently built show an improvement in appearance and substantialness. The early houses were neither ceiled nor plastered inside and rarely painted on the outside. To each family, occupying half of the house, was allotted three and one-half rooms, so called, two on the first floor, a fair-sized room on the second floor, and back of that, formed by the pitch of the roof, the half room, more in the nature of a storage room or attic than a sleeping room. The houses built in those days i. e., during the Civil War times up to the seventies, naturally had no bath nor even running water in the kitchen. The occupants were fortunate if they had a common hydrant within the distance of an ordinary city block.¹

An interesting view of some housing conditions prevailing in 1898 is given in a report of the local resident engineer to the president of a company operating in the Hazleton mining district. Describing "the present [1898] condition of the dwelling houses on the property" the engineer states:

Many of the roofs do not leak very badly, but, in attempting to patch an old shingle roof, such as those mentioned as requiring to be renewed, the work of repairing many times will be found to cause new leaks.

The cellars (with the exception of Nos. 90 to 99 inclusive, and all the houses recently built) have been excavated under one half, or along the side of the block; generally under the front side, and have but one window of two panes of glass, with a screen over the outside, so that the window can be taken out for ventilation. In some cases the occupants have excavated the earth from the other half of the cellar. There should be an additional window in the cellar so as to afford proper ventilation, and aid in

¹ Edward W. Parker: Workmen's houses in the anthracite regions. Housing problems in America. Proceedings of the fifth national housing conference, Providence, R. I., October, 1916, pp. 54-66.

drying up dampness that we found to exist. In one case, Nos. 116 and 117, there was a drain stopped up, causing about 2 to 3 feet of water standing in the cellar.

The privies, in all cases but where the new or recently built houses are located, are in very bad shape; in most cases the appearances would indicate that the contractor was obliged to put down the pits a certain depth, and plank up the sides. In sinking these pits rock probably was encountered and the regulation height of plank curbing put in, thus bringing the floor of the privy several feet above the surface. The privy walls are full up to the top of the ground, and the contents of the wells flow out into surface ditches, new houses excepted. In the older houses the privy buildings have the appearance of having been built by the tenants, and are poor apologies for the purpose. My opinion is that if these premises came under the inspection of the health officer, these affairs would be badly criticized.

Not many of the houses have any protection over the front doors, thereby permitting the storm to drive into the houses under the doors, that do not fit very closely to the floor. A weatherstrip on the bottom of the door in such cases would assist in remedying this; and a small porch would also be of service; which if made, would prevent the building of such porches by the tenants as is sometimes the case, and so built do not always improve the external appearances.

If it is concluded to paint the houses—the older ones—(the new have been painted) in most cases it will be necessary to new weatherboard one side only, and renail the other three sides of these buildings. If, however, it is not expedient at this time to expend so much money in painting, some patching and renailing of the siding could be made to pass for a while longer, and probably, too, some of the roofs might be left untouched in the same way.

The chimneys, where they start from the third or attic floor, should be changed so as to start from the bottom, as now in these cases the stovepipe is carried up through the floors, enters the chimney in the attic, and is positively dangerous from fire.

We found many of the houses clean and neat; others just the opposite. The best houses are occupied by Americans, but the majority of the occupants are foreigners.

Age of Houses.

SOME of these early constructed houses are still in existence and in use by the companies. One company has 20 semidetached houses, built in 1857; another has 88, built in 1876, and still another has 137 erected in 1885. A fourth company has houses dating from 1851. Of the 1,323 houses for which the year of construction is known, 480, or 36.3 per cent, had been erected before 1881 and 753, or 56.9 per cent, before 1890.

Observation of some of the older houses showed them to be of substantial timber, the boards fully an inch in thickness, and free from knots. By removing the battens, papering, and then weatherboarding, warm and comfortable houses may be made out of them.

Types of Houses.

THE type of house at present prevailing in the region has not changed greatly since the beginning of the industry. The tendency has been to enlarge the original type of house.

With few exceptions the houses are of frame, are weatherboarded, have shingle roofs, and are plastered or ceiled inside. They differ very slightly from the houses of the soft-coal region.²

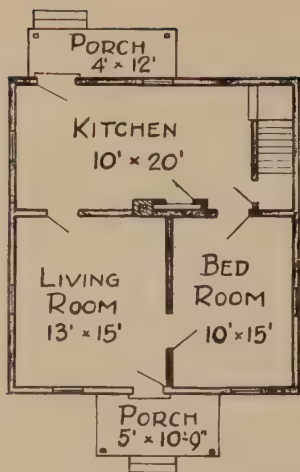
² See MONTHLY LABOR REVIEW, April, 1920, pp. 215 to 222.



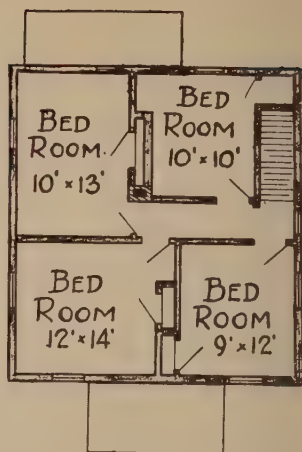
FIG. 1.—Detached houses for miners in the anthracite coal region. Decidedly larger and superior to the average.



FIG. 2.—Eight-room semidetached houses in anthracite region, built in 1870. Probable cost at time of survey (1916), \$1,200 per dwelling (family unit); rent, \$8 per month per dwelling. Stove heat, running water in kitchen, outside privies. Larger and superior to the average house in the region.



FIRST FLOOR.



SECOND FLOOR.



FIRST FLOOR.



SECOND FLOOR.

FIG. 3.—First and second floor plans of detached frame houses for miners in anthracite region.

Of the 6,853 dwellings covered by the survey 6,708, or 97.9 per cent, are frame dwellings. Only 43, or less than 1 per cent, are of brick, and 102, or 1.5 per cent, are of stone, tile, or concrete, or other combination of materials.

There is a greater proportion of semidetached houses in the anthracite region than in any other locality studied by the Bureau, 4,923, or 80.9 per cent, of the houses here being double or semidetached, 728, or 12 per cent, single or detached, and 438, or 7.1 per cent, row dwellings. The type is not reported for 764, or 11.2 per cent of the total of 6,853 included.

Size of Dwellings.

THE distribution of dwellings according to the number of rooms shows that of the 5,320 for which this information has been furnished, the largest proportion, 1,724, or 32.4 per cent, have 6 rooms; the next largest proportion, 1,604, or 30.2 per cent, have 5 rooms. The average size of the miners' family quarters in the anthracite region is 5.5 rooms, as compared with 4.4 rooms in the soft-coal region. The distribution of dwellings by number of rooms is as follows:

NUMBER AND PER CENT OF DWELLINGS HAVING EACH CLASSIFIED NUMBER OF ROOMS, IN THE ANTHRACITE REGION OF PENNSYLVANIA.

Size of dwelling.	Number of dwellings.	Per cent of total.
2 rooms.....	37	0.7
3 rooms.....	247	4.6
4 rooms.....	920	17.3
5 rooms.....	1,604	30.2
6 rooms.....	1,724	32.4
7 rooms.....	479	9.0
8 rooms.....	237	4.6
9 rooms and over.....	72	1.4
Total.....	5,320	100.0

For 1,533, or 23.4 per cent, of the total number of 6,853 reported no information as regards number of rooms was secured.

Rent.

OF THE 5,303 dwellings for which rent per month in relation to number of rooms has been reported, the rent for 4,589, or 86.5 per cent, is below \$8 per month. Taking the dwellings which are typical as respects the number of rooms, namely, 5 and 6 room dwellings, it appears that of the former the largest proportion—436, or 27.3 per cent—rent for \$3 and under \$4 per month, and of the latter the greatest proportion—517, or 30 per cent—rent for \$6 and under \$7 a month.

The rents charged for dwellings according to the number of rooms are brought out in the table below.

NUMBER AND PER CENT OF DWELLINGS OF EACH SPECIFIED NUMBER OF ROOMS RENTING AT EACH CLASSIFIED AMOUNT PER MONTH, IN THE ANTHRACITE REGION OF PENNSYLVANIA.

Number.

Rent per month.	Dwellings having—								Total.
	2 rooms.	3 rooms.	4 rooms.	5 rooms.	6 rooms.	7 rooms.	8 rooms.	9 rooms and over.	
Under \$3.....	17	67	121	109	15	3	1	1	334
\$3 and under \$4.....	16	106	138	436	19	57	2	1	775
\$4 and under \$5.....	1	60	345	284	189	3	3	1	886
\$5 and under \$6.....		5	199	364	414	55	5	2	1,044
\$6 and under \$7.....		5	85	287	517	70	61	3	1,028
\$7 and under \$8.....			16	71	353	50	26	1	522
\$8 and under \$9.....			13	42	83	81	72	13	259
\$9 and under \$10.....					71	10	22	9	112
\$10 and under \$11.....					45	65	17	10	146
\$11 and under \$12.....				6		8	2	1	17
\$12 and under \$14.....					3	89	5	7	103
\$14 and under \$16.....					3	2	13	9	27
\$16 and under \$18.....					1	25		2	28
\$18 and over.....						11	3	3	22
Total.....	34	243	917	1,599	1,722	479	237	72	5,303

Per cent.

Under \$3.....	50.0	27.6	13.2	6.8	0.9	0.6	0.4	1.4	6.8
\$3 and under \$4.....	47.1	43.6	15.0	27.3	1.1	11.9	.8	1.4	14.6
\$4 and under \$5.....	2.9	24.7	37.6	17.8	11.0	.6	1.3	1.4	16.7
\$5 and under \$6.....		2.1	21.7	22.8	24.0	11.6	2.1	2.8	19.7
\$6 and under \$7.....		2.1	9.3	17.9	30.0	14.6	25.7	4.2	19.4
\$7 and under \$8.....			1.7	4.4	20.3	10.4	11.0	1.4	9.8
\$8 and under \$9.....			1.4	2.6	5.1	6.5	30.4	18.1	4.9
\$9 and under \$10.....					4.1	2.1	9.3	12.5	2.1
\$10 and under \$11.....					2.6	13.6	7.2	26.4	2.8
\$11 and under \$12.....				.4		1.7	.8	1.4	.3
\$12 and under \$14.....					.1	18.6	2.1	9.7	1.9
\$14 and under \$16.....					.2	.4	5.5	12.5	.5
\$16 and under \$18.....					.1	5.2		2.8	.5
\$18 and over.....						2.3	3.4	4.2	.4
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Considering the rent paid per room per month, the details of which are not shown here, it is seen that the largest number (171, or 36.4 per cent of the 470 for which data were reported) of single or detached frame dwellings rent for from 50 cents to less than \$1; the next largest number (141, or 30 per cent) rent from \$1 to less than \$1.50. In the case of double or semidetached frame dwellings, the largest number (1,998 out of 3,984, or 50.2 per cent) range from \$1 to less than \$1.50 per month, and the next largest number (1,563, or 39.2 per cent) from 50 cents to less than \$1. The fact that the single houses rent for relatively less per room is explained by the fact that the semidetached houses cost more per room and therefore to bring the same return must be rented at a higher rate.

Modern Improvements.

INFORMATION as to conveniences and sanitary equipment provided has been given concerning 4,034 dwellings, or 58.9 per cent of the 6,853 covered in the anthracite region. Of the 4,034 dwellings, 1,824, or 45.2 per cent, have gas or electric light, but in practically all cases it is electricity and not gas which is used. All modern conveniences, including complete three-piece bathroom with sewer or cesspool connections are found in 255, or 6.3 per cent of the total reported. On the other hand, 1,813, or 44.9 per cent, have no modern conveniences at all, and have outside privies.

The 4,034 dwellings are distributed as to types of conveniences provided as follows:

NUMBER AND PER CENT OF DWELLINGS HAVING SPECIFIED MODERN IMPROVEMENTS, IN THE ANTHRACITE REGION OF PENNSYLVANIA.

Improvements.	Number of dwellings.	Per cent of total.
Bath, water-closet, running water, and electric light.....	¹ 234	5.8
Bath, water-closet, running water.....	21	.5
Bath, gas or electric light.....	62	1.5
Water-closet, running water, gas or electric light.....	170	4.2
Water-closet, running water.....	360	8.9
Running water, gas or electric light.....	418	10.4
Running water only.....	16	.4
Gas or electric light only.....	940	23.8
Outside privies only.....	1,813	44.9
Total.....	4,034	100.0

¹ 40 have combination bath and laundry tub in kitchen.

Maintenance.

AMONG different features of company management it may be noted that lawns are made and maintained by the tenants, while fences, where provided, are built and maintained by the company. Only four companies attempt to encourage gardening by giving prizes, while practically all the companies have either written rules or an unwritten agreement that tenants must either keep their houses in fair and habitable condition or vacate. The enforcement of the rule, however, depends largely upon the labor supply.

One informant observed at the time the investigation was made (1916), that he was putting up with tenants that he would not tolerate when the labor supply was abundant.

Ten of the 24 companies report that they undertake garbage collection for their tenants. However, as 3 of the 10 companies report that collection is made every two months, or even less frequently, the statement can apply only to rubbish and waste, certainly not to kitchen and table waste. In one instance the duty rests with the city, as the company houses are within an incorporated city.

Except in a few instances the open-vault privy is still used in the region. With regard to the frequency of cleaning, it appears from the reports of the companies that three report this as annual, three as biennial, one triennial, one as every 18 months, and two semi-annually; two companies report that the matter is left to the tenant, and two report that privies are moved to a new place when necessary. Other companies report that all privies are cleaned when necessary and not at any regular intervals.

Cost of Maintenance.

SEVENTEEN out of 24 companies covered in the anthracite region reported both rent receipts and annual expenses of maintenance of company houses. These companies may be placed in two groups according to the comparability of the data furnished. In the first group have been placed those which charge to their maintenance account not only ordinary labor and material for upkeep of the company houses, but also insurance, taxes, and additions and improvements, remodeling, etc., of the houses; in the second group, those which do not charge additions, improvements, and remodeling to that account. For the first group maintenance expenses absorb 69 per cent of the average annual rent receipts, and for the second group 32 per cent. The details are disclosed in the following table:

RELATION OF EXPENDITURE FOR MAINTENANCE AND THE AMOUNT INVESTED IN HOUSING TO RENT RECEIPTS OF CERTAIN COMPANIES IN THE ANTHRACITE REGION OF PENNSYLVANIA, 1911 TO 1915.

Company.	Value of houses.	Average annual rent receipts, 1911 to 1915.	Expenditure for maintenance.		Return on investment after deduction of charges to maintenance.		
			Amount.	Per cent of rent receipts.	Amount.	Per cent.	
Group I: 1							
Company No. 1.....	\$311,700	\$16,564.92	\$18,108.88	109	(²)	.....	
Company No. 2.....	78,900	6,082.32	7,468.14	123	(²)	.....	
Company No. 3.....	88,330	4,368.54	2,775.63	64	\$1,592.91	4.2	
Company No. 4.....	203,400	34,597.41	34,596.30	100	1.11	.....	
Company No. 5.....	77,000	6,672.75	5,883.62	88	789.13	1.0	
Company No. 6.....	1,134,000	65,640.12	36,887.24	56	28,752.88	2.5	
Company No. 7.....	1,469,000	101,321.27	56,365.94	56	44,955.33	3.1	
Company No. 8.....	(³)	45,670.06	31,414.72	69	14,255.34	(³)	
Total.....	(⁴)	280,917.39	193,500.47	69	87,416.92	(⁴)	
Group II: 4							
Company No. 1.....	553,138	118,101.79	32,099.54	27	86,002.25	15.6	
Company No. 2.....	(³)	6,318.39	5,369.77	85	948.62	(³)	
Company No. 3.....	(³)	7,189.78	1,673.30	23	5,516.48	(³)	
Company No. 4.....	(³)	35,706.00	13,463.00	38	22,243.00	(³)	
Company No. 5.....	18,000	3,138.59	1,411.29	45	1,727.30	9.6	
Company No. 6.....	92,500	11,826.74	1,865.76	16	9,960.98	10.8	
Company No. 7.....	96,300	5,904.35	3,147.86	53	2,756.49	2.9	
Company No. 8.....	26,100	3,166.44	161.45	5	3,004.99	11.5	
Company No. 9.....	(³)	10,726.91	5,250.72	49	5,476.19	(³)	
Total.....	(⁴)	202,078.99	64,442.69	32	137,636.30	(⁴)	

¹ Maintenance includes upkeep, insurance, taxes, additions, improvements, and remodeling.

² Deficit.

³ Not reported.

⁴ Maintenance includes upkeep, insurance, and taxes.

Administration.

THE larger coal companies in the region conduct their housing through a separate land department; for all other companies the housing enterprise is a part of the general operating business, segregated only in the accounting of the company. At each mine the local superintendent oversees the housing and community activities connected with the operation of the mine, so that a rather widespread paternalism still exists in the region.

Rents for company houses are collected by deduction from the employee's wages, 8 companies of the 24 included in the survey making deductions semimonthly and 16 monthly. Only two companies deduct rent in advance. A liberal policy appears to be observed in the matter of deferring collection of rent during the illness or unemployment of the worker. A few companies have no rule in that respect, but decide each case on its merits as it arises. Instances were found, too, where pensioners or widows of deceased employees were living rent-free in company houses.

Special Anthracite Communities.

THE changes in housing in the anthracite-coal region have consisted in remodeling and repairing existing structures. There has been, as already stated, no building of extensive model communities. Two exceptional groups of houses have been built, very largely as an experiment, by one of the larger corporations in the region. These developments, however, have not, because of their limited size, had any very noticeable effect in improving housing. Each group in question contains 40 semidetached dwellings, one group consisting of concrete houses, the other of brick houses. Thus only 40 households are accommodated in each development, whereas at one mine 2,100 men are employed, and at the other 1,500.

Anthracite Community A.

The group of concrete houses consists of 20 semidetached houses or 40 dwellings arranged along the sides of a rectangular area 375 by 430 feet, four semidetached houses facing the short sides and six facing the long sides of the rectangle. Between the rectangular space and the houses there is a roadway about 25 feet wide, graveled and provided with gutters; a strip of parking about 5 feet wide; and a concrete side walk about 4 feet wide. The houses are set about 15 feet back from the sidewalk line. A strip of parking surrounds the whole development.

The central area provides a playground and park space of approximately 3.5 acres. A few trees have been planted here, but at the time the study was made this space had not been developed; it has been used as a playground, though unequipped for this purpose.

The lawns around all of the houses have been exceptionally well maintained; flowers and shrubbery have been tastefully arranged, relieving the plain white painted concrete exterior of the houses. (Fig. 4.) Gardens are planted on the rear lots between the dwellings and the outhouses.

The ground on which the development is located is depressed in the center and rises to form a terrace behind the houses. The lowest point of the site is the northwest corner, from which point drainage is effected. On the whole the drainage situation is not overfavorable and in the spring the cellars of the houses are frequently flooded.

Each dwelling or family unit has a lot 40 by 150 feet.

The shell of the house is made of concrete poured into sectional metal molds, a special patented system. The floors are of reinforced concrete, as are also the stairs, stair casings, and all partitions. The walls are without air spaces. Since coal cinders were used in the concrete aggregate, it was believed that dampness would not develop. This, however, has not been the case. One tenant interviewed complained of dampness. The plaster in the three houses which have been plastered on the inside has peeled off, and the paint both inside and out has blistered in spots, evidencing the condensation and passing of moisture through the walls.

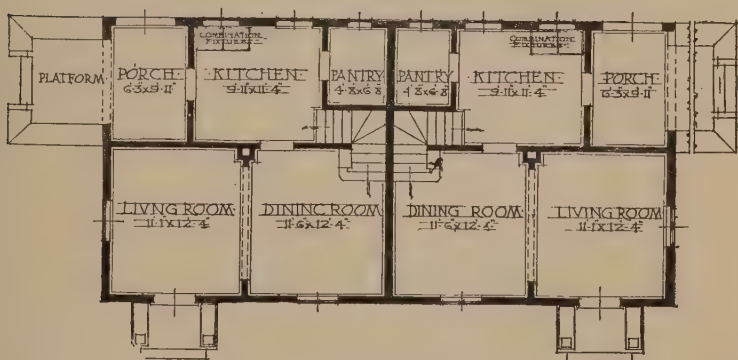
The roof is flat and is made of a concrete slab covered with slag roofing. Rain gutters and down spouts are provided. A small concrete slab is suspended over both front and back doors. Flower boxes are placed on either side of the front doors.

The plan of each dwelling is simple: three rooms downstairs and four upstairs; one of the latter was originally planned as a sleeping porch, but that feature was abandoned as not acceptable to the class of labor to be housed. There is a cellar under part of the house. The outside dimensions of each unit are 24 by 24 feet. Each house is equipped with a water system in the kitchen and a hot-water tank connected to a water back in the range. A combination laundry and bath tub is installed in the kitchen; this may also be used as a kitchen sink. The kitchen is of fair size and is used also as the dining room.

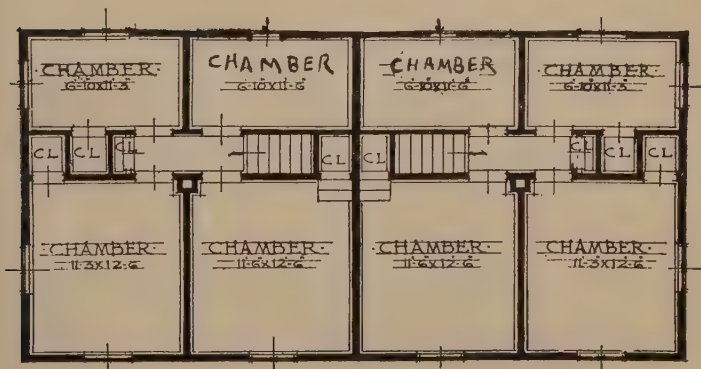
The outhouse is of concrete and contains both the toilet, with a concrete vault, and the coal bin.

These houses were erected in 1911-12 and cost \$2,033 per family unit. The cost for improvements—grading and planting, drainage lines and piping for water system in kitchen, fencing, concrete walks, road work, electric light, etc.—cost about \$456, which brings the cost of each dwelling, not including land, to \$2,489. The outhouses cost about \$68.50 per dwelling.

The houses are rented only to English-speaking workmen. The rate is \$12 a month, which is 5.8 per cent of the investment, not including land. An additional charge of \$1 a month is made for water.



FIRST FLOOR.



SECOND FLOOR.

FIG. 4.—Pictures and plans of group of poured concrete semidetached houses in anthracite region.

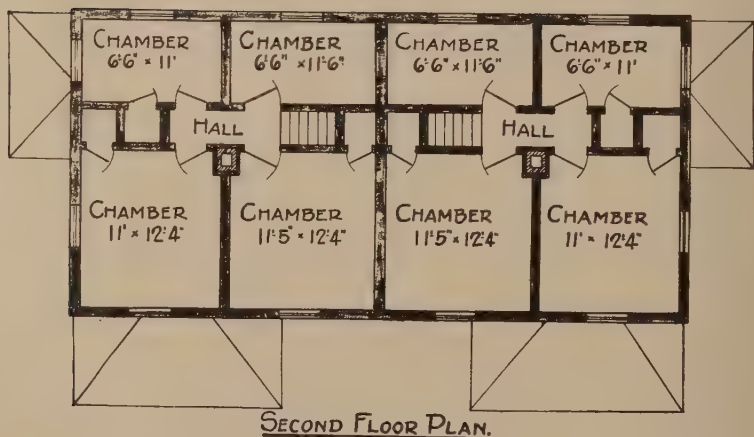
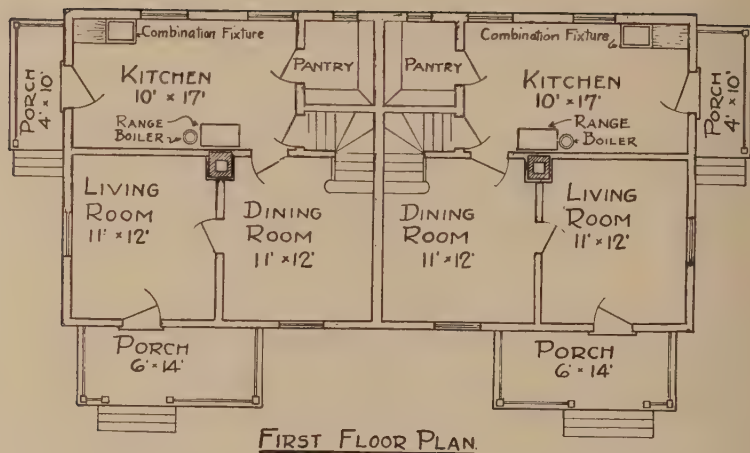


FIG. 5.—First and second story plans of modern improved houses—group of 40 dwellings (brick, semi-detached)—built in 1916 in the anthracite region. The water-closet is in the basement (not shown). The combination fixture in the kitchen is used as a bath and laundry tub as well as a sink.

Backyard wire fences are provided by the company; gardening is encouraged by giving prizes. The tenants maintain their own lawns. These were in excellent condition at the time of the agent's visit.

The interior of the house is not so attractive as the exterior. The concrete floors are chilling and uncomfortable. A broken stair coping remains broken, as it seems difficult if not impossible to repair it. No wall finish appears to last long on account of the dampness.

Anthracite Community B.

The same company which erected as an experiment the 40 concrete dwellings described also put up 20 semidetached blocks (40 dwellings) of brick, furred and plastered inside, for the foremen of another of its mines. These houses were built along the curving brow of a hillside overlooking a rather picturesque valley. They are modern houses having such improvements as a water-closet, and a combination fixture in the kitchen adaptable as a two-tray laundry tub, kitchen sink, and drain board, and bathtub. The placing of the water-closet in the basement is rather an undesirable feature. The houses are steam heated. Each dwelling unit has a lot 40 by 150 feet.

These dwellings were erected in 1915-16, and each family unit of seven rooms and a cellar cost \$1,635. The outside improvements consisting of paving and street work, fencing, sewer, septic tanks, water piping, concrete sidewalks, trees and planting, when prorated to each dwelling, amounted to \$526, bringing the cost of each unit of the semidetached block to \$2,161. This is \$328 less per unit than the cost of the concrete semidetached blocks erected in 1911-12 which furnish the same amount of room space, but have neither steam heat nor inside water-closets as do the brick houses described.

The rent for the brick houses is \$12 a month, which is 6.7 per cent on the investment not including the cost of the land.

Plans of these houses are shown in Fig. 5. There are three rooms downstairs and four upstairs; closet space is provided. There are front and rear porches, and rain gutters and down spouts, the latter a very unusual feature on company houses anywhere.

State Aid to Solve Housing Problems in Italy.

BY GOVERNMENT loans to building organizations, cooperative societies, and municipalities, and by exemption of imported building materials from the payment of customs duties, the Italian Government appears to be making an effort to afford relief from the situation caused by lack of proper housing facilities. The United States trade commissioner at Rome, under date of January

15, 1920, submitted to the Department of Commerce the following statement on this subject, which was published in Commerce Reports (Washington) for March 14:

Under the existing provisions, whereby the State participates in the payment of the interest on loans made to building organizations and cooperative societies, the Government has already assumed annual interest charges amounting to about 2,500,000 lire [\$482,500, par], representing loans for building purposes totaling approximately 120,000,000 lire [\$23,160,000, par]. The following municipalities have so far been granted aid by the State in this connection: Milan, Reggio Emilia, Pozzuoli, Caldebesco, Sivignano, and Vezzano, as well as the institutes for popular houses of Catania, Bergamo, Bologna, Florence, Milan, Modena, Rome, Turin, Treviso, and Venice, and various cooperative organizations at Rome, Parma, and Reggio Emilia. Many additional proposals are now under consideration, and a number of local bodies have already begun construction without awaiting the definite allotment of funds from the Government. It is calculated that at this time there are under construction in Italy popular houses the cost of which will exceed 200,000,000 lire [\$38,600,000, par], without including in this sum the construction undertaken at Rome, where the work already under way will provide 25,000 rooms.

Every effort is being made to simplify the formalities connected with the granting of loans, and provision has now been made whereby commercial, industrial, and agricultural organizations can also obtain aid from the State for the construction of houses for their own employees, provided separate accounts are kept in this connection, and the interest derived from their investment does not exceed 5 per cent. Such houses can not be used for any purpose other than that for which they were originally intended. There has been a demand for such aid on the part of certain large industrial establishments, especially at Milan, and it is believed that these companies will now undertake construction on a large scale.

Another stimulus to building activities will consist in the complete exemption from customs duties of building materials imported. The exemption from the normal tax and the supertax will also be considerably extended. Houses coming under the definition of popular or economical houses, as well as popular hotels and dormitories constructed by municipalities and bodies not organized for profit, will enjoy such exemption for 20 years; other houses not belonging in the above classes, but at the same time not of a luxurious character, will be exempt for 10 years, and this exemption may be extended for an additional 15 years.

In addition to encouraging new construction, efforts are being made to assure the most advantageous use of housing facilities already available. By a decree just published, Government commissioners will be appointed in cities possessing over 100,000 inhabitants on December 31, 1919, to see that tenants receive the full protection afforded them by law in connection with the leasing of apartments, furnished rooms, etc., and in regard to evictions. By this decree it is also provided that civil and military offices of the Government, having a temporary character owing to the war, must be removed within three months from private buildings heretofore occupied, and established in temporary buildings which will be constructed. Furthermore, by virtue of a decree of the Ministry of Industry, Commerce, and Labor, buildings intended for use as hotels previous to the war, which have been sold for other purposes but are not yet converted, can be redeemed at the selling price, without further compensation, for their transfer to persons who will use such buildings as hotels and guarantee to continue to make such use of them for not less than 10 years.

From the energetic manner in which the Italian Government is attacking the housing problem there is every reason to believe that a considerable improvement in prevailing conditions will take place within a reasonable period.

LABOR BUREAUS.

The International Labor Office.

THE labor sections of the covenant of the League of Nations provide for a permanent organization for dealing with labor conditions internationally. An international labor conference composed of delegates representing governments, employees, and employers from the several countries belonging to the league, is to meet annually to discuss and pass upon proposals submitted regarding labor standards. A permanent international labor office is also established, with a governing body consisting of 24 members, 12 representing governments and 6 each the employees and the employers. The permanent office staff under the direction of a director and such assistants and heads of divisions as may be found necessary is provided for.

The new international labor office has already been partially organized with Mr. Albert Thomas as director, Mr. H. B. Butler, deputy director, and Mr. Lomercier acting as private secretary, and is in operation with offices at the temporary seat of the League of Nations in London. A periodical bulletin, to be published in French and English and such other languages as the governing body may think desirable, will be issued shortly. In the meantime, the office issues statements of its initial activities to the members of the governing body, the delegates to the Washington conference, and others who are interested in or in sympathy with the work.

The inquiry into Bolshevism projected by the League of Nations is in charge of Dr. Pardo, who has made preparations for the inquiry and the preliminary questions connected with it.

The executive work and preliminary organization of conferences are in the hands of Mr. Phelan and Mr. Pône. Mr. di Palma Castiglione has charge of the study of agricultural problems, and questions relating to seamen are being handled by Commander Crimms of the British mercantile marine.

The first duty devolving upon the international labor office under article 405 of the peace treaty was the official notification of all the governments, through the secretary general of the League of Nations, of the text of the conventions and resolutions which were adopted by the Washington conference. It is also the duty of the international labor office to see that the governments bring the conventions before

their competent authorities within a year, or in special cases within 18 months, with a view to their ratification.

Among other duties of the office is that of the preparation of the agenda for the meetings of the conference and in accordance with this provision an agenda has been prepared and invitations issued for the Seamen's Conference at Genoa, June 15. A questionnaire has been drawn up which, under the terms of the peace treaty, has been forwarded to the governments. Ship owners and seamen's organizations have also been given an opportunity to contribute to the preliminary inquiries as it was considered that this would increase the effectiveness of the conference. The following agenda¹ as adopted by the governing body has been communicated to the different governments:

Agenda for Seamen's Conference.

1. Application to seamen of the convention drafted at Washington last November, limiting the hours of work in all industrial undertakings, including transport by sea and, under conditions to be determined, transport by inland waterways, to 8 hours in the day and 48 in the week.

Consequential effects as regards manning and the regulations relating to accommodation and health on board ship.

2. Supervision of articles of agreement. Provision of facilities for finding employment for seamen. Application to seamen of the convention and recommendations adopted at Washington in November last in regard to unemployment and unemployment insurance.

3. Application to seamen of the convention adopted at Washington prohibiting the employment of children under 14 years of age.

4. Consideration of the possibility of drawing up an international seamen's code.

Other plans of the office include the distribution week by week of information that it has collected on important articles that have appeared in the press of the various countries. It is not the intention to establish a methodical or exhaustive bulletin of the social movement, but rather to send to the employers' and workers' organizations and to the press some of the more important articles dealing with social questions that are published in the various countries.

Examples of such articles already sent out by the office are "The application of the eight-hour day," "A plebiscite on the Swiss bill to regulate conditions of labor," and "Labor conditions in British India." The first article outlines the general provisions of the laws in the different countries and lists the principal exceptions. The Washington conference drew up a draft convention on the 8-hour day which the 41 signatory nations there represented pledged themselves to submit to their parliaments for ratification within one year. This convention which applies to all industrial enterprises—that is, to all factories in which a workman labors for an employer—provides

¹ An article giving the laws and agreements governing working conditions among American seamen, covering in detail the different items of the agenda, appears on pages 1 to 20 of this issue of the REVIEW.

for exceptions for countries in which climatic conditions or the imperfect development of industrial organization would make its application impossible. China, Persia, and Siam are excepted from the convention; Greece and Roumania are granted a certain period in which to put it into operation; and certain special provisions apply to British India and to Japan. The international labor office has supervision of the execution of these measures and will present for consideration at the annual conferences in 1920 and 1921 the question of extending the 8-hour day to seamen, farm laborers, and other industries and occupations.

The Swiss bill relative to the regulation of conditions of labor was to be referred to the people on March 21. The demand for a referendum came from considerably more than the 50,000 citizens necessary before a bill can be submitted to popular vote. The outstanding feature of the bill lies in the fact that it makes compulsory the collective agreements drawn up by a series of official commissions in which workers and employers are equally represented. Great extension of power is given to these official bodies and the opponents of the bill criticize its bureaucratic features and hold that it will subject the entire country to the arbitrary will of a series of commissions over which public opinion will have no control.

Recent Changes in Personnel of State Industrial Commissions.

New York.

THE New York State Industrial Commission, under date of April 19, 1920, announced the appointment of Dr. Leonard W. Hatch as manager of the State Insurance Fund. For the past 12 years Dr. Hatch has been in charge of the Bureau of Statistics and Information of the commission. He brings to the new position close acquaintance with the problems connected with industrial accidents and workmen's compensation in that State from the time of the first New York compensation law to the present. In the field of accident and compensation statistics he is a recognized authority of national reputation. Prior to entering State work Dr. Hatch was for two years a teacher of economics at Columbia University and in Bowdoin College.

Oklahoma.

The State Industrial Commission of Oklahoma has notified this Bureau of the death of its chairman, W. C. Jackson, on April 25, 1920. The vacancy has not been filled.

LABOR ORGANIZATIONS.

Growth of Trade-Union Movement in Belgium.

AN ARTICLE in the *Correspondenzblatt*¹ states that while the Belgian trade-unions survived the war, they emerged from it in a very enfeebled condition. Their coffers were empty and their members were almost entirely unemployed. The turmoil of the war drove the workers from one place to another and it was impossible for the trade-unions to keep in touch with them. By degrees the membership declined to the 1902 figure, but the organizing staff remained intact and its hopes of better times in store were fulfilled with the signing of the armistice. The unions issued an appeal to their members and expressed their firm determination to obtain an 8-hour day and a minimum wage of 1 franc (19.3 cents, par) per hour. The appeal was not without effect on the underpaid or unemployed masses. Everywhere members joined the 8-hour-day movement, though it must be conceded that they were largely induced to join by the promise of the unions to give financial support to workers who declined to work more than 9 hours a day and for less than 1 franc per hour.

The result has been a large addition to the trade-unions' membership. In 1913 the total membership was 128,759; in 1919 it had increased to 613,500. The following table shows the numerical strength of the various unions.

MEMBERSHIP OF BELGIAN TRADE-UNIONS, 1913 AND 1919.

Occupational group.	Membership in—		Occupational group.	Membership in—	
	1913	1919		1913	1919
Mining.....	18,546	117,000	Clothing.....	4,617	9,000
Metal workers.....	26,606	100,000	Shoe factories.....	4,265	9,000
Railroad workers.....		85,000	Printing trades.....	1,834	7,000
Building trades.....	10,245	50,000	Hotel and restaurant workers.....	170	6,000
Textile mills.....	21,500	50,000	Workers in theaters and orchestras.....		6,000
Factory workers.....	3,510	45,000	Glass workers.....	1,500	6,000
Transport workers.....	4,705	40,000	Workers in schools.....	80	1,500
Quarries.....	14,885	21,000	Street car employees.....		5,000
Diamond cutting.....	3,831	13,000	Various trades.....	3,890	
Government employees.....	3,205	12,000			
Tobacco workers.....	2,900	11,000			
Clerks.....	1,570	10,000			
Foodstuff industry.....	900	10,000			
			Total.....	128,759	613,500

¹ *Correspondenzblatt der Generalkommission der Gewerkschaften.* Berlin, Jan. 17, 1920.

Amsterdam Conference of International Union of Woodworkers.

THE fourth conference of the International Union of Woodworkers, the first after the end of the war, was held at Amsterdam December 8-10, 1919.¹ It was attended by 27 delegates from 12 different countries (France, England, Belgium, Luxemburg, Austria, Bulgaria, Germany, Denmark, Sweden, Norway, Holland, and Switzerland), representing 23 affiliated organizations. All delegates seemed to be animated with the earnest desire to heal the wounds inflicted by the war, to mend what had been broken. So great was the desire of the delegates to rebuild the International Union within the shortest time possible and to turn it into an organization for the welfare of the woodworkers all over the world, that the discussion on all items led to unanimous decisions.

It was resolved to remove the headquarters of the International Union to Amsterdam. The former secretary, Leipart, resigned owing to his appointment as minister of labor of Wurttemberg, and C. Woudenberg was elected secretary. The conference appointed a commission charged with the drafting of a new constitution and rules for the union. The contributions were fixed by the conference at 15 guilders (\$6.03, par) per 1,000 members, from January 1, 1920, at the prewar rate of exchange. The secretary reported that at present the union had a debt of 8,000 marks (\$1,905.60, par) owing to the fact that a number of organizations were not in a position to meet their financial obligations during the war. The conference resolved that the arrears should be paid.

The conference adopted the following resolutions:

1. *Declaration of principle.*—*Resolved*, That peace between the nations and entire emancipation of the working classes of all countries can be effected only by the complete understanding and serried unity of all nations. This unity will have to be supported by an energetic action in all countries of all trade-unions against militarism and for the abolishment of the standing armies. Only capitalism is interested in the maintaining of armies and navies. Consequently the working classes all over the world must more than ever make their utmost exertions to overthrow the capitalist system and create a society wherein exploitation of man by man will have disappeared and where labor will be honored and dominative.

These general considerations being admitted, the conference states with great satisfaction that in the Woodworkers' Union the ancient brotherhood has been restored.

The conference registers that between the woodworkers of those countries belonging to the union hostility or distrust do not exist any more and calls upon the woodworkers of all countries to join the international combination in order to fight upon a united front for the mutual interests.

2. *The blockade of Russia.*—*Resolved*, That the International Conference emphatically protests against the blockade of Russia and calls on the national sections to use

¹ Bulletin der Internationalen Union der Holzarbeiter, No. 1/17. Amsterdam, January, 1920.

their utmost exertions together with the other organizations in their countries so as to bring to bear influence upon the governments of their countries in order immediately to stop all intervention which is an attack upon the right of self-determination of all nations.

The conference hails with delight those workers who with a firm conviction attack the capitalist citadel, with the aim of founding a social democracy.

The conference declares that the woodworkers of all countries, by working for the socialization of all trades and industries, will also contribute to the abolishment of social contrasts so that peace between the nations will be attained and assured.

3. *Prisoners of war.*—*Resolved*, That the members of all organizations represented in the conference demand the release of German and Austrian prisoners of war in France. The conference protests against the fact that this release has not yet taken place.

4. *The distress in Austria.*—The International Conference considering that the population of Austria is suffering very much expresses its sympathy and calls on its members to support all measures, moral as well as financial, which may contribute to saving Austria from starvation.

Resolutions 2 and 3 were transmitted to the Supreme Allied Council.

STRIKES AND LOCKOUTS.

Strikes and Lockouts in Canada in 1919.

A REVIEW of strikes and lockouts occurring in Canada during the year 1919 is contained in the March issue of the Labor Gazette (Ottawa). It is stated that both the number of disputes and the time lost were the greatest in the history of the Department of Labor. There were 298 strikes and lockouts which started in 1919, eight being carried over from the preceding year. The number of employees involved was 138,988, and the number of employers was 1,913; the total number of working days lost was estimated at 3,942,189. For statistical purposes, only those strikes and lockouts which involved a cessation of work by six or more employees for a period of not less than 48 hours are counted. The report states that in about 90 per cent of the strikes not more than 1,000 persons were involved, and in about 34 per cent of the strikes not more than 50 employees were involved.

As to duration, 44 per cent of the strikes lasted for more than 10 days; 55 per cent were under 15 days' duration; and about 20 per cent lasted more than 30 days. The following table gives the number of industrial disputes, the number of workpeople involved, and the number of days lost, by industry:

NUMBER OF DISPUTES, NUMBER OF WORKPEOPLE INVOLVED, AND NUMBER OF DAYS LOST IN STRIKES IN CANADA IN 1919, BY INDUSTRY.

Industry.	Number of disputes.	Number of employees involved.	Time loss.	
			Working days.	Per cent of total.
Lumbering.....	21	4,127	100,785	2.6
Mines, smelters, quarries, clay products, etc.....	20	12,196	714,340	18.1
Railway, canal, and harbor construction.....	4	1,591	69,454	1.8
Building and construction.....	40	10,779	287,146	7.3
Metals, machinery, and conveyances.....	75	70,268	1,693,704	50.6
Woodworking.....	6	843	16,312	.4
Pulp and paper.....	5	1,108	29,910	.8
Printing and publishing.....	5	225	2,732	.1
Clothing.....	23	7,539	189,141	4.8
Textiles.....	8	4,886	210,362	5.3
Foods, liquors, and tobacco.....	21	6,268	56,708	1.4
Chemicals and explosives.....	3	96	1,971	.....
Leather.....	1	40	320	.....
Transportation:				
Steam railway service.....	5	2,700	26,500	.7
Electric railway service.....	7	3,294	40,300	1.0
Miscellaneous transport.....	12	5,608	83,504	2.1
Navigation.....	8	1,131	35,096	.9
Public utilities.....	10	1,657	39,716	.8
Municipal employment.....	7	563	2,434	.1
Miscellaneous.....	22	4,069	50,754	1.2
Total.....	298	138,988	3,942,189	100.0

Classified by cause, the report lists 223 of the 298 strikes as due to demands for increases in wages and for shorter hours, or as due to reduction in wages. The record shows that 157 terminated in favor of employees and 88 in favor of employers; 23 were compromise settlements, while 30 were indefinite and unterminated. Direct negotiations between the parties resulted in the settlement of 154 strikes, while conciliation or mediation by the Department of Labor terminated 41 strikes.

Strikes of Italian Government Employees.¹

Compiled by ALFRED MAYLANDER.

SINCE the termination of the war Italy, in common with other countries, has experienced extensive labor unrest. During 1919 strikes of varying duration in the textile, iron and steel, electrical, and other important industries were an everyday occurrence. Nearly all these strikes had a strictly economic character, being caused by demands for wage increases proportionate to the steadily increasing cost of living and for a shorter working day, i. e., the 8-hour day. Only in a few of the industrial strikes were the economic demands coupled with a demand for shop councils. The Italian Government showed its solicitude for improving the economic conditions of the working classes by creating a well-planned system of employment exchanges, by granting generous unemployment allowances, by developing its social insurance system (through the introduction of compulsory old-age, invalidity, and unemployment insurance), and by enacting numerous protective labor laws. The Government failed, however, in its attempts to lower the cost of living, the chief cause of the present labor unrest. Italian exchange fell steadily in foreign money markets and with this fall of exchange the cost of living rose to new heights, for Italy, in common with other European countries, must to-day largely obtain from abroad its supply of foodstuffs, raw materials, and coal.

Thus, the unrest of labor, instead of abating, grew more intense at the beginning of the present year, and, while previously confined to workers in private employment, it now began to spread also among the vast army of workers in the employment of the State. In January, 1920, the employees in the postal, telegraph, and telephone services and those in the operating departments of the State railroads made demands for large wage increases, improved service conditions and participation in the administration. In both instances these

¹ Compiled from various articles on the subject in January, 1920, issues of the *Giornale d'Italia* of Rome and *Il Secolo* and *Corriere della Sera*, both of Milan.

demands were initiated by organizations of radical socialistic tendencies with which only a small minority of the employees was affiliated. The Government entered into negotiations with committees of the employees' organizations, but while willing to make far-reaching concessions in order to avoid a strike in the communication and transportation systems of the country which would paralyze all industry and commerce and seriously affect the food supply, it could not see its way to granting unconditionally all the demands of the employees. It emphasized that, in view of the heavy indebtedness of the State, a wage increase requiring an additional annual expenditure of hundreds of millions of lire would further impair the greatly strained credit of the State at a time when a new issue of bonds was being offered for subscription, and would also tend to lower still more the rate of exchange, which in turn would cause a further rise in the cost of living. For all these reasons the Government declared itself unwilling to ask Parliament to grant such large increases as were demanded by the employees. It was also strongly opposed to the political demand of the employees for representation on the administrative boards of the services and resented the accusation of inefficiency of these boards as composed at present. In this attitude the Government was strongly supported by public opinion and by the metropolitan press, with the sole exception of the organs of the Socialist Party. The Government also hoped that the unlawfulness of a strike of public servants and the disciplinary measures provided in the civil-service regulations for participation in a strike would deter the employees from taking part in such a movement. But it was mistaken in this belief, for after an abrupt breaking off of negotiations a strike was called by the lower-grade employees of the postal, telegraph, and telephone services, and a week later, before this strike had terminated, the railroad men also went on strike.

A brief account is here given as to the demands of the workers in both of these strikes, the negotiations preceding the strikes, the course of the strikes, and their final settlements.

Strike of Postal, Telegraph, and Telephone Employees.

Situation of Employees Before the Strike.

UP TO January, 1919, the salaries of employees of the postal and telegraph services had practically remained on the prewar basis. At the end of the winter of 1918-19 the central committee of the Federation of Postal and Telegraph Employees submitted to the minister of posts a memorial in which, in addition to a number of demands relating to service conditions, it was demanded that the minimum annual salary of employees of group 3 (clerks, letter carriers,

messengers, etc.) should be raised to 3,500 lire (\$675.50 par), that of employees of group 2 (administrative officers) to 4,500 lire (\$868.50 par), and that of employees of group 1 (higher officers with a university degree, so-called *segretari*) to 5,000 lire (\$965 par). Through agitation and by adoption of passive resistance during the Christmas season of 1918 the employees had obtained an increase of 600 lire (\$115.80 par). A threat of strike in April, 1919, brought them a temporary bonus of 1,200 lire (\$231.60 par), which was granted to all Government employees without distinction. The minister of post, after consideration of the memorial of the employees' federation, prepared a new salary schedule and new service regulations for submission to the Council of State and to Parliament, but before he could submit this proposal the entire cabinet resigned. The new minister, after examining the reforms proposed by his predecessor, entered into lengthy negotiations with the employees' federation which centered around the salary demands, and together with the prime minister and the minister of finance, finally declared to the federation that the salaries of Government employees had been fixed on a uniform basis for all Government departments by a special royal commission of seven previously appointed and that no change could be made in favor of the postal, telegraph, and telephone employees, as this would mean unfair discrimination against employees of other departments. In view of this incontestable declaration the federation had to content itself for the time being with concessions of a few disciplinary and organic reforms.

Three months later, however, the declaration made by the ministry was disproved by a decree of December 6, 1919, which granted to all classes of Government employees an annual increase of 1,000 lire (\$193 par), but specially excluded from this grant the postal, telegraph, telephone, and railroad employees. An inquiry as to the cause of this discrimination elicited the reply that owing to the large number of employees in the postal, telegraph, telephone, and railroad services and the unfavorable condition of the State's finances no increase could be granted to employees of these services without the approval of Parliament.

Final Demands of the Employees.

On January 8, 1920, a committee of the employees' federation, accompanied by members of the Lower House of Parliament representing all political factions, presented to the minister of posts the following demands: (1) Revision of the basic salary schedules and their equalization with those for other Government departments; (2) increase of compensation for overtime and night work, this increase to correspond to the increased cost of living; (3) extension of the

premiums for intensive work to all the personnel of the postal, telegraph, and telephone service; and (4) revision every three months of the cost-of-living bonus.

On January 10 the minister of posts replied to the demands of the federation by offering the following concessions:

Employees of group 1.—The basic salaries to be equalized to those in other Government departments.

Employees of group 2.—Chiefs of offices (*capi-ufficio*): Minimum salary, 5,600 lire (\$1,080.80, par); after 4 years' service, 6,200 lire (\$1,176.60, par); after 8 years, 6,900 lire (\$1,331.70, par); after 11 years, 7,600 lire (\$1,466.80, par); and after 14 years, 8,300 lire (\$1,601.90, par). Chief clerks and higher grade officers (*primi ufficiali, ufficiali*), etc.: Minimum salary, 3,500 lire (\$675.50, par); after 4 years' service, 4,000 lire (\$772, par); after 10 years, 4,500 lire (\$868.50, par); then through 7 promotions of 500 lire (\$96.50, par), each rising to 8,000 lire (\$1,544, par). Special officers (*applicati*): Minimum salary, 3,000 lire (\$579, par), then through 7 promotions of 300 lire (\$57.90, par), every 4 years, rising to 5,100 lire (\$984.30, par), and after a further 4 years to 5,500 lire (\$1,061.50, par).

Employees of group 3.—Clerks: Minimum salary, 2,800 lire (\$540.40, par) rising to a maximum of 5,400 lire (\$1,042.20, par) through 4 promotions at 3-year intervals and 3 further promotions at 4-year intervals.

Messengers and female clerks: Minimum salary 2,400 lire (\$463.20, par), rising to 3,000 lire (\$579, par) through 3 promotions at 4-year intervals of 200 lire (\$38.60, par) each, and thereafter rising to 3,600 lire (\$649.80, par) through 2 promotions at 4-year intervals of 300 lire (\$57.90, par) each.

Overtime: For officials the compensation to be increased from 1.25 to 2.25 lire (24.1 to 43.4 cents, par) per hour and for other employees from 0.75 to 1.25 lire (14.5 to 24.1 cents, par) per hour.

Nightwork: The extra compensation for work from 8 p. m. to midnight to be raised to 0.70 lire (13.5 cents, par) per hour and for work from midnight to 7 a. m. to 1 lire (19.3 cents, par) per hour.

Acting officers performing the duties of statutory officers to be promoted to full rank, retroactive to January 1, 1918.

The representatives of the federation declared themselves not satisfied with these concessions and submitted them to the national convention of the federation held in Rome on January 11. At this convention of the federation, held jointly with the linemen's union and the union of employees of group 3, it was resolved to reject the proposals, to dissolve the central committee of the federation, and to appoint a secret strike committee. It was asserted that the wage increases demanded would not exceed 35,000,000 lire (\$6,755,000, par), that the increase demanded by the postal, telegraph, and telephone employees represented an irreducible minimum, and that the minister had not granted in full a single one of the four demands of the federation.

The Strike.

During the temporary absence from Rome of the minister of posts, the strike committee of the federation, which had assured itself of the support of the General Federation of Labor, called a strike of postal,

telegraph, and telephone employees in the entire country to go into effect at midnight of January 13. Even on its first day the strike was very effective. All of group 3 of the postal and telegraph employees, which includes those employees who perform the collecting, assorting, and delivery of the mails, responded to the call. Group 2, which includes the medium salaried employees, responded in part, the members of a rival union, the Associazione Sindacale Posteografica having voted not to strike. Of the employees of the central administration about 40 per cent reported for duty. The union of substitute receiving clerks of the postal and telegraph stations also decline to order a strike and instructed its members to continue at work. The telephone service was greatly impaired, large numbers of the female employees not reporting for duty. Their absence was due less to a feeling of solidarity with the strikers than to intimidation.

In the absence of the minister of posts, the undersecretary of the department issued an order limiting the mail service, while the telegraph service was closed to the public and the press, and only official messages were dispatched. Interurban telephone service was also limited to official messages.

The public, which was greatly inconvenienced through the strike, sided strongly with the Government. Although admitting that the economic conditions of the striking employees required improvement, the public took the point of view that the ministry had met in great part the demands of the employees and that the latter should have placed their cause in the hands of Parliament. The ministry of posts received numerous offers of service from private citizens, students of the high schools, and retired post office and telegraph employees who offered to act as mail collectors, letter carriers, messengers, etc. The aeronautic branch and the signal service of the army were also ordered to assist the postal authorities. The large financial and industrial establishments in a number of large cities established an emergency mail service of their own. A few striking employees returned to work because they were disgusted with the revolutionary speeches made at strikers' meetings, but on the whole the strikers' ranks maintained a solid front.

During the entire period of the strike the Government and the striking employees engaged in animated discussions in the daily press. The Government put forth the argument that before the war the postal, telegraph, and telephone services were a source of revenue to the State, while now these services were operated with a large deficit, and that in view of this fact and the serious condition of Italian State finances the demands of the employees could not be granted in full. The employees, on the other hand, contended (1) that the fact that the operation of a Government establishment results in a

deficit does not furnish a valid reason for refusing a wage increase to underpaid employees of this establishment; (2) that the deficit of public industrial establishments is largely due to inefficient administration; and (3) that efficient administration could be brought about by the creation of equipartisan administrative boards composed of representatives of industrial and commercial organizations on the one hand and representatives of the various groups of Government officials on the other. These contentions of the striking employees found support in some of the most influential papers.

Termination of the Strike.

On January 19, while the strike of the postal, telegraph, and telephone employees was still in effect, the railroad employees called a general strike. As the Government did not care to have simultaneously on hand two strikes of Government workers and as the railroad strike deprived the central strike committee of the postal, telegraph, and telephone employees of all means of communication with the branch committees, both the Government and the postal, etc., employees were inclined to enter negotiations. The Government gave assurances that no disciplinary measures would be taken against the strikers, agreed to pay their salaries during the strike, and promised to reconsider all the demands of the strikers. Accepting these assurances, the central strike committee called off the strike on the night of January 20 and on the following day all strikers returned to their work. In calling off the strike the committee, however, pointed out that this action had merely the significance of a truce, that the workers trusted in the good faith of the Government and expected full compliance with their original four demands, and, that, if the Government should fail to live up to the assurances given, the strike would be renewed.

The Railroad Strike.

Demands of the Syndicalistic Union of Railroad Employees.

IN SPITE of the fact that, although passenger and freight rates had been doubled during the war, the operation of the Italian State railways during the year 1919 had resulted in a deficit of 400,000,000 lire (\$77,200,000, par), a syndicalistic union of railroad employees, *Il Sindacato Ferrovieri Italiani*, initiated at the end of that year a movement for wage increases and for participation in the management of the railroads. One of the main causes of the deficit was the enormous increase in the wage bill of the railways, which had risen from 300,000,000 lire to 1,000,000,000 lire (\$57,900,000 to \$193,000,000, par).

The railway men were better paid than any other class of Government employees. Locomotive engineers, for example, were in re-

ceipt of salaries much higher than those of judges, division chiefs of Government bureaus, or staff officers in the army and navy. To be sure, the cost of living in Italy had risen over 200 per cent as compared with prewar times and the high salaries of railroad men had a greatly reduced purchasing value, but so had the much lower salaries of other classes of wage workers. Yet, during the first week of January the *Sindacato* presented to the minister of transport a memorial which had the character of an ultimatum, for it intimated that a general railroad strike would be called unless the demands of the railroad men were granted by January 15. The demands incorporated in the memorial were the following:

1. A more rational reclassification of the operating departments of the railroads (re-arrangement of classes, grades, and qualifications of the personnel).
2. Abolition of probationary service.
3. Fairer and more efficient rules for the hiring, competitive examinations, and promotion of employees, increases of basic wages and allowances, and representation of the employees on all boards deciding questions relating to the personnel.
4. Transfers not to be dependent on the patronage and arbitrary will of superiors.
5. Revision of the disciplinary regulations, with substitution of several grades of reprimand for fines.
6. Abolition of promotions out of turn, which it was claimed had generally been granted as premiums for servility and abjectness.
7. Abrogation of article 56 of the law No. 429 of 1907 which provides dismissal and loss of pay of striking railroad employees.
8. Eligibility of railroad employees to political offices.
9. Strict enforcement of the 8-hour day and of the weekly rest period with respect to all classes of employees.
10. Participation of the employees in the local railroad commissions and in the division and central administrative boards through representatives elected from among the members of the *Sindacato Ferrovieri*.

The following schedule of minimum and maximum salaries demanded by the various groups and classes of employees was appended:

MINIMUM AND MAXIMUM SALARY RATES OF ITALIAN RAILROAD EMPLOYEES AS DEMANDED BY THE *SINDACATO FERROVIERI* IN JANUARY, 1920.

[One lira at par=19.3 cents.]

Group and class of employees.	Annual salary.	
	Minimum.	Maximum.
<i>Office staff.</i>		
Principal clerks, storehouse superintendents, principal auditors, principal technical clerks, chief draftsmen.....	<i>Lire.</i> 10,000	<i>Lire.</i> 12,500
Clerks, first class, auditors, technical clerks, first class, principal draftsmen, principal technical assistants.....	7,400	11,300
Clerks, technical clerks, draftsmen, technical assistants.....	6,800	7,400
Principal typist stenographers (female).....	7,000	10,000
Typist stenographers (female).....	5,600	7,000
Document file clerks.....	6,800	9,700
Copyists, first class.....	6,200	9,400
Copyists.....	5,800	6,200
Chief messengers.....	6,800	9,700
Messengers, first class.....	6,600	8,600
Messengers.....	5,800	6,000
Servants, attendants.....	5,400	8,200

MINIMUM AND MAXIMUM SALARY RATES OF ITALIAN RAILROAD EMPLOYEES AS
DEMANDED BY THE SINDACATO FERROVIARI IN JANUARY, 1920—Concluded.

Group and class of employees.	Annual salary.	
	Min- imum.	Maxi- mum.
<i>Station staff.</i>		
Station masters, first class.....	11,700	13,200
Assistant station masters, first class, and chief telegraphers.....	11,500	13,000
Station agents.....	7,800	11,700
Assistant station agents and principal telegraphers.....	7,600	11,500
Dispatchers.....	7,100	11,700
Probationary clerks.....	5,400	
Clerks, first class.....	7,000	10,900
Clerks.....	6,200	7,000
Agents at flag stations, first class.....	7,000	10,900
Agents at flag stations.....	6,600	10,500
Rolling-stock foremen and chief switchmen.....	8,800	10,500
Chief assistant freight agent, chief waiting-room guards.....	6,200	9,400
Assistant freight agent, waiting-room guards.....	6,000	9,000
Rolling-stock gang foremen, switchmen foremen.....	6,400	9,400
Rolling-stock handlers, switchmen.....	6,000	9,000
Laborers.....	5,400	7,800
<i>Trainmen.</i>		
Chief superintendent of trainmen, chief traveling auditor.....	11,500	12,700
Superintendent of trainmen, traveling auditors, first class.....	10,900	11,700
Inspector of trainmen, traveling auditor.....	7,600	10,900
Chief passenger conductor.....	6,800	10,500
Assistant passenger conductor, freight conductor.....	6,000	9,000
Brakemen.....	5,500	8,600
Traverser operator.....	5,400	7,800
<i>Engine crew.</i>		
Roundhouse superintendent, first class.....	13,000	15,000
Roundhouse superintendent.....	10,000	13,000
Locomotive engineer, motorman - electric trains.....	9,000	13,000
Switch-engine drivers.....	7,800	11,700
Firemen and assistant motormen.....	7,000	10,900
Foremen of engine heaters and tenders.....	6,400	9,100
Engine heaters and tenders.....	6,000	8,600
<i>Line crews.</i>		
Track inspector.....	7,000	11,300
Section foreman.....	5,400	8,000
Gate guard (female), per day.....		8
<i>Supplies.</i>		
Chief storekeeper.....	10,000	13,500
Assistant chief storekeeper.....	7,600	11,500
Storekeepers.....	7,600	11,500
Storekeeper's clerks.....	6,600	7,600
Inspectors, first class.....	7,000	10,900
Inspectors.....	6,200	7,000
Foremen of labor gangs.....	6,000	9,000
Laborers.....	5,400	7,800
<i>Watchmen.</i>		
Captain of the watch.....	6,600	9,700
Watchmen.....	5,700	8,800
<i>Unskilled labor in shops.</i>		
Foremen of laborers.....	6,200	9,000
Oilers.....	5,500	8,200
Laborers.....	5,400	7,800
<i>Mechanics.</i>		
Master mechanics, first class.....	11,700	13,600
Master mechanics.....	8,600	11,700
Chief testers, chief foremen.....	8,000	11,700
Testers, foremen.....	7,000	11,300
Skilled workers, first class.....	7,000	10,900
Skilled workers, second class.....	6,600	10,100
<i>Archives.</i>		
Chief and assistant chief keeper of records.....	10,100	12,300
Keeper and assistant keeper of records.....	7,400	11,300
Clerks, first class.....	7,400	11,000
Clerks.....	7,000	9,400

A study of the preceding table shows that it does not include high administrative officials, who certainly also deserved salary increases if increases were to be granted to the employees of medium and low rank. But even if the high officials are left out of consideration, the salaries proposed for employees of medium and low rank represent such a large increase over present salaries that the granting of them would involve a further burdening of the State budget to the amount of 750,000,000 to 800,000,000 lire (\$144,750,000 to \$154,400,000, par). Moreover, the salaries proposed, although including the high-cost-of-living bonus, computed at 1,200 lire (\$231.60, par), and a number of other allowances, do not include the local allowance (*sopprassoldo di localita*) granted to each employee, which is based on the size of the locality in which he resides. This allowance at the time amounted to about 10 per cent of the salary and could never exceed 840 lire (\$162.12, par) per year. According to the demands of the Sindacato this allowance would vary between a minimum of 500 lire (\$96.50, par) and a maximum of 2,000 lire (\$386, par). In addition the Sindacato demanded the granting of a family allowance of 1 lira (19.3 cents, par) per day for each dependent member of the family of each employee, who is living in his household.

The Italian press condemned the economic as well as the organic and political demands of the railroad employees as preposterous. It pointed out that the present condition of the State finances precludes even the considering of the enormous salary increases demanded in the memorial, and that the granting of such large increases to the railroad employees would mean gross discrimination against other less well remunerated classes of Government employees. The demands as to abolition of fines and of promotions out of turn for merit would lower the morale and efficiency of the personnel. Concerning the demand for representation of the employees on the administrative board of the railroads, the press pointed out that even if the Government should grant this demand, the Sindacato Ferroviieri practically demands a monopoly of this representation, although over half of the railroad employees belong to no organization at all and a considerable number of the organized employees are members of other organizations. Thus, the Sindacato Ferroviieri, representing merely a majority of the organized employees, wanted the Government to ignore and suppress the unorganized employees and the minority organizations.

Reply of the Government.

Shortly after receipt of the memorial of the Sindacato Ferroviieri a cabinet council discussed the demands of the railroad employees. The cabinet, in a statement given out on January 10, showed great

inclination to conciliate the railroad employees by far-reaching concessions. The text of this statement was as follows:

In its recent sessions the cabinet council, while examining the situation of the railroad employees, has resolved to admit three representatives of the personnel as members of the administrative board of the railroads. These three representatives shall for the first time be elected by direct vote of the employees, and, in order that the minorities be also represented, the ballot used shall contain two tickets. The administrative board thus constituted shall—

(a) On the basis of concrete proposals and at the earliest possible date draft a law recognizing the organizations of railroad employees and providing for their proportionate representation on the board itself, the representatives thus elected to supplant the above three representatives;

(b) Draft new basic schedules to be submitted for the approval of Parliament, these schedules to provide for reduction of the present personnel, the simplification of the service, and such other measures as are required to assure a normal financial return from the operation of the railroad.

(c) Put into effect the 8-hour day and the weekly rest, in the first place in the case of those groups of employees who would have been granted the 8-hour day during December of last year, and gradually within the year 1920 for all other groups of employees.

The cabinet council, in consideration of the fact that the preparation of the new basic schedules will require some time, has authorized the minister of finance to make an extraordinary disbursement of 100,000,000 lire (\$19,300,000, par) which shall be expended as follows:

(a) Five million lire (\$965,000, par) for subsidies to railroad employees' cooperative stores.

(b) Five million lire (\$965,000, par) for premiums to temporary employees who have been in continuous service over one year—gatekeepers and freight-house watchmen.

(c) Ninety million lire (\$17,370,000, par) to be distributed in two equal payments payable at the end of January and of February, to permanent and probationary employees.

On January 15 the minister of transport officially informed the Sindacato of the above concessions by the cabinet council, also informing them that all employees would receive two premiums, one payable at the end of January and one at the end of February, the subsidy in the case of permanent employees to amount to 300 lire (\$57.90, par), in the case of temporary employees to 100 lire (\$19.30, par), and in that of gatekeepers to 50 lire (\$9.65, par).

Thus the Government was willing to grant some of the most important demands of the employees, such as representation on the administrative board and the 8-hour day. The demand for salary increases is met half way by the immediate grant of a subsidy and by the proposed submission of a new salary schedule to Parliament.

Rejection of the Government's Concessions.

In view of the conciliatory attitude of the Government it should reasonably have been expected that the railroad employees would accept the immediate concessions made to them, await the action of the administrative board and of Parliament with respect to the prom-

ised new salary schedule, and desist from calling a strike. But as in other industrial disputes the agitation of a small radical minority prevailed.

Of the 167,000 railroad employees in Italy about 67,000 are organized and the remaining 100,000 are not organized. The organized employees are distributed among three organizations, besides the *Sindacato Ferrovieri*. These three other organizations, with a total membership of 27,000, were opposed to a strike and willing to accept the concessions made by the Government. As regards the 100,000 unorganized employees it may be safely assumed that they also were not in favor of a general strike. Only the *Sindacato Ferrovieri* resolved to reject the Government's proposals and to call a general strike. Thus only 40,000 out of a total of 167,000 employees, or less than one-fourth, precipitated a tie-up of the Italian railroads.

The Strike.

On the evening of January 19, at a meeting held in Rome and attended by about 3,000 railroad employees, a general strike was called by the *Sindacato Ferrovieri*, to become effective on January 20 at 6 a. m. Simultaneously with the calling of the strike by the *Sindacato* the other organizations of railroad employees issued a joint proclamation condemning the action of the *Sindacato* and appealing to their members to continue at work.

The Government had been expecting that a strike would be called and had taken extensive measures to maintain a train service between all important centers. In anticipation of the strike it had moved large supplies of food, fuel, and raw materials to all large cities. The strike was not so successful as the *Sindacato* had hoped. Barely one-third of the men went on a strike, but as the strikers included the majority of the locomotive engineers, firemen, conductors, and brakemen, traffic was badly crippled. The strike was most intensive in the northern districts; in the central districts it was only partial; and in the southern districts and Sicily traffic was nearly normal.

The Government ordered the temporary employees to return to work by a certain date, but it was not until the strike had been going on for seven days that a similar order was issued to the permanent employees. Although daily reports received by the ministry of transport indicated greatly improved traffic conditions and showed that the strike was a failure, the Government entered into negotiations with the strikers' leaders. The *Sindacato* receded from its unreasonable demand that it should be the sole representative of the employees on the administrative board, and since most of the other demands of the employees had been granted by the Government before the strike, the only question to be settled was whether the strikers should be paid wages for the time they were absent from

work, and whether the promotions of the men who remained at work should be canceled. On January 29 the Government concluded an agreement with the strikers the principal clauses of which were as follows:

1. All employees who have taken part in the strike will be reinstated in their former positions.

2. The pay of the striking employees accrued during the period of the strike shall be deducted from their salaries and paid into the railroad employees' housing fund by the Government.

3. Reaffirming the principle of the 8-hour day for all workers in private and State industries, the 8-hour day shall be actually introduced not later than April 30 for all engine crews, not later than June 30 for all train crews, and at the earliest possible date for all other railroad employees.

4. Regulations for the introduction of the 8-hour day shall be discussed and issued by the administrative board, to which shall be admitted in an advisory capacity three members of each of the eight groups of employees, these members to be elected by the groups themselves, with proper representation of the minorities.

5. The administrative board shall draft salary schedules in which shall be included premiums and allowances, with the exception of the cost-of-living bonus. These schedules shall be submitted by the Government to Parliament, together with the memorial of the *Sindacato Ferrovieri*.

6. The railroad employees shall, with recognition of the minorities, elect five members of the administrative board. In drafting the new service regulations the administrative board shall make provision for the establishment of local commissions.

The *Sindacato*, which on January 30 itself ordered the men to resume work, completely failed to make the strike universal, and obtained no concessions that had not already been granted. In spite of a few isolated attempts at sabotage, it provoked no revolutionary demonstrations, and failed to induce any other bodies to declare a sympathetic strike. The Italian nation was the real loser by the strike, for the financial loss caused to the State ran into hundreds of million of lire. Masses of perishable goods were ruined, and the rate of exchange of the lire experienced a further sharp decline.

CONCILIATION AND ARBITRATION.

Conciliation and Arbitration in New Zealand.

A PAMPHLET bearing this title has been issued by the National Industrial Conference Board.¹ This study is put forth as a review of the experience of New Zealand, which covers the longest period of any country for this type of legislation. The act of 1894 provided for the principles of conciliation and arbitration at a time when the country was but little developed industrially, so that almost the whole history of its development has taken place under the influence of this law. While conciliation is a vital part of this system, the principle of arbitration gives it its background and effectiveness. "The former method, both in theory and in practice affords an opportunity for differences to be completely or partly settled. The latter secures the final adjustment of any unsettled elements of the dispute and the enforcement of the agreement upon all, both employers and workers, engaged in the industry."

The first consideration is of the development of the system, which involved as an essential factor the existence of labor organizations. Indeed the subtitle of the act of 1894 was "an act to encourage the formation of industrial unions and associations." Conciliation was to be effected by boards made up of representatives of industrial unions of employers and workers respectively, in equal numbers, the chairman to be elected by the membership from outside their number. In case of failure of agreement a court of arbitration was resorted to. This was to consist of three persons, one of whom was to be a judge of the supreme court. Amendments and revisions have been made from time to time, various consolidations being made, that of 1908 being the existing law, though subsequent amendments have been added. The report summarizes these various amendments. Important among them are the provisions for preferential treatment of union members and the imposition of a penalty for strikes or lockouts pending the disposition of a dispute. It is also provided that disputes may go directly to a court of arbitration without prior attempts at conciliation. In 1908 conciliation boards were abolished and councils substituted therefor. Industrial commissioners were assigned to districts, and, when a dispute is referred to one of them, he obtains the names of suitable "assessors" from both sides and from

¹ Conciliation and arbitration in New Zealand. Research report No. 23, December, 1919. National Industrial Conference Board, Boston, Mass. 46 p.

the industry in which the dispute exists. This involves the formation of a new council for each dispute. While the original principle of the system is unchanged by the amendments, there is a tendency to give more definiteness and effectiveness to the processes involved and to penalize all activities tending toward or creating either strikes or lockouts.

The number of employer unions grew from 121 with a membership of 3,630 in 1907 to 149 with a membership of 5,819 in 1914; in 1917 there were 145 with 5,390 members. Workers' unions showed a similar fluctuation, there being 310 with a membership of 45,614 in 1907 and 403 with a membership of 73,991 persons in 1914; in 1917 there were 382 unions with 72,873 members. These organizations lie at the foundation of the administrative methods. Employees are protected in their membership, and awards are binding upon every employer engaged in the industry covered by the awards, and upon every worker employed by such employer. Penalties lie against either party committing a breach of the award. Each award names a minimum wage which is generally a compromise between the demands of the union and the offers of the employers. In practical working this minimum wage does not dominate. "In our manufacturing industries at least an average of 50 per cent of the workers received more than the rate granted in the awards of the court of arbitration."

A labor disputes investigation act, modeled after the Canadian act, was provided in 1913, and this affords additional machinery for the investigation of disputes. This applies only to groups of workers not at the time bound by awards or industrial agreements, and to the employers of such workers. It provides a penalty for strikes or lockouts until after due notice or time for investigation, and also during the term of any agreement.

The proportion of disputes settled by conciliation and by arbitration has varied considerably at different times, though the average total shows a practically even distribution—49.7 per cent for conciliation and 50.3 per cent for arbitration. The ratio was practically one to two from 1894 to 1901, 1 to 17 from 1902 to 1908, and two to one from 1909 to 1918. During the first 12 years of existence of the act there were no strikes whatever, and the total reported from 1894 to 1918 inclusive was 169. Most of these took place in the years 1911 to 1914, inclusive, 46 occurring in the last year alone. The next year this number dropped to four, and in the three succeeding years there were 7, 8, and 6 strikes, respectively.

The number of these strikes, though comparatively small, is sufficient proof that the system has not given universal satisfaction. At times the employers complain and at other times it is the workmen who give expression of a sense of grievance. Prosecution has been

necessary to enforce awards, there being 69 prosecutions in 1911 and 50 in 1913. The next highest number is 17 in 1917 while in 1915, 1916, and 1918 none were found necessary. In summing up, it is said that the system, "while by no means curing industrial unrest, has shown the value of conciliation as a means of settling industrial disputes and preventing them from becoming more serious." The attitude of the courts has tended to check unreasonable demands, and "it must be borne in mind that the efficacy of conciliation may be attributable in part to the existence of the principle of compulsory arbitration, which might easily make the two parties more disposed to compromise, on grounds of expediency, if for no other reason."

PUBLICATIONS RELATING TO LABOR.

Official—United States.

CALIFORNIA.—*State Board of Education. Documents relating to vocational education. Fiscal year 1919-20. Sacramento, 1919. 80 pp. Bulletin No. 23-A.*

— *State Library. Books for the blind. Circular and finding list. Fifth edition. Sacramento, July 1, 1919. 139 pp.*

ILLINOIS (CHICAGO).—*Department of Health. Report and handbook for the years 1911 to 1918, inclusive. Chicago, 1919. 1,535 pp.*

The report of the bureau of sanitation, which is of special interest to labor, is in five parts, devoted respectively to History of the bureau, Administrative and inspection methods, Division of plumbing and new buildings, Division of housing and sanitation, and Division of ventilation. The report of the last division considers, among other matters, ventilation standards, the effect of ventilation on health, and administrative and inspection methods employed by the division, and suggests that the division should be reorganized on an engineering basis and its scope broadened to include those features in health conservation that are clearly of an engineering nature, namely: Heating, ventilation, illumination, and industrial hygiene.

MARYLAND.—*Industrial Accident Commission. Fifth annual report. November 1, 1918, to October 31, 1919. [Baltimore, 1920.] 27 pp.*

This report is reviewed on pages 166 and 167 of this issue of the MONTHLY LABOR REVIEW.

NEW YORK.—*Industrial Commission. Bureau of Industrial Code. Rules relating to work in compressed air. New York, 230 Fifth Avenue, 1920. 16 pp. Industrial Code Bulletin No. 22.*

VIRGINIA.—*Industrial Commission. First annual report for the year ending September 30, 1919. Richmond, 1920. 121 pp.*

A digest of this report is given on pages 168 and 169 of this issue of the MONTHLY LABOR REVIEW.

UNITED STATES.—*Department of Commerce. Report of the secretary and reports of bureaus, 1919. Washington, 1920. 1,071 pp.*

Subjects of interest to labor considered in the report of the secretary are the use of motion pictures in industry, superannuation and retirement, and the work of the industrial board and the industrial cooperation service of the department.

— *Bureau of the Census. Transportation by water. 1916. Washington, 1920. 230 pp.*

The number of persons employed on both land and sea in connection with water transportation as reported for 1916 was 236,882, which is 48,534, or 25.8 per cent more than were so employed in 1906. Of these, 153,301, or 64.7 per cent, were employed on vessels, being an increase of 12,372, or 8.8 per cent, over the number reported in 1906.

The relative increase in the wages of employees on vessels was much larger than that in the salaries and wages of employees on land, 44.1 per cent for the former compared with 19.6 per cent for the latter. The wages of the men aboard ship constituted 73.3 per cent of the total salaries and wages in 1916 and 69.5 per cent in 1906.

— *Department of Labor. Bureau of Immigration. Immigration laws (act of February 5, 1917). Rules of May 1, 1917 (fourth edition—February, 1920). [Amendment to rule 22.] Washington, 1920. 108 pp. Map.*

UNITED STATES.—*Department of Labor. Children's Bureau. Every child in school. A safeguard against child labor and illiteracy. Washington, 1919. 15 pp. Children's year follow-up series No. 3. Bureau publication No. 64.*

In this account of measures adopted in 44 States during 1918 to inaugurate a back-to-school and stay-in-school movement the need for a better enforcement of the child-labor laws and higher standards for the protection of working children in every State is emphasized. The census of 1910 gives the number of employed children between the ages of 10 and 16 years as approximately 2,000,000. About three-fourths of these are in agricultural pursuits. Less than 300,000 children are affected by the provisions of the Federal child-labor law. Employment on farms and domestic service are exempt from the restrictions of State laws. It has been found that the States which have a high percentage of illiteracy also have a high percentage of rural child labor. Minimum standards for children entering employment formulated at the Children's Bureau conferences in May and June, 1919, are incorporated as a part of the bulletin.

— *Department of the Interior. Bureau of Mines. A glossary of the mining and mineral industry, by Albert H. Fay. Washington, 1920. 754 pp. Bulletin 95.*

This glossary "presents in one comprehensive volume the available standard, technical terms relating to the mining and mineral industry, as well as provincialisms that have been or are now in use in English-speaking countries."

— *Employees' Compensation Commission. Third Annual Report, July 1, 1918, to June 30, 1919. Washington, 1919. 185 pp.*

A digest of this report appears on pages 164 to 166 of this issue of the MONTHLY LABOR REVIEW.

— *Foreman training courses. Washington, 1920. 108 pp. Bulletin No. 36. Trade and industrial series No. 7.*

— *Interstate Commerce Commission. Collisions, derailments, and other accidents resulting in injury to persons, equipment, or roadbed, arising from the operation of railways used in interstate commerce. April, May, and June, 1919. Washington, 1920. 31 pp. Accident Bulletin No. 72.*

— *Railroad Administration. Division of Labor. Women's Service Section. Number of women employed and character of their employment for dates of January 1, April 1, July 1, October 1, 1919. (Class I roads.) Eastern, Southern, and Western territories by roads. Washington, 1920. 84 pp.*

Official—Foreign Countries.

AUSTRALIA (QUEENSLAND).—*Government Statistician's Office. Statistics of the State of Queensland for the year 1917. Brisbane, 1918.*

Included in the data given in Part IV, are duties, fees, and taxes under the Workmen's Compensation Act, the Factories and Shops Act, the Contractors' and Workmen's Lien Act, and the Labor Exchanges Act, and Part VIII, in addition to other information, contains rates of wages, and wholesale and retail prices of articles of general consumption in Brisbane.

— (VICTORIA).—*Government Statist. Forty-first annual report on Friendly Societies, for the year 1918. Melbourne [1919]. xvi, 30 pp.*

Reports a total of 46 societies with 1,496 branches, having 149,558 members, and an annual income of £658,435 (\$3,204,273.93 par) in 1918.

BELGIUM.—*Ministère de l'Industrie, du Travail et du Ravitaillement. Administration des Mines et Inspection du Travail. La situation des industries Belges en décembre 1919. Brussels, 1920. 41 pp.*

Two earlier reports on the industrial situation in Belgium since the war were issued in February and June, 1919, respectively. (See MONTHLY LABOR REVIEW, Novem-

ber, 1919, p. 350.) This last investigation includes all mines under the supervision of the Administration of Mines and the industrial establishments employing 20 or more persons in 1914.

In comparing the number of persons employed in mines and metallurgical establishments in December, 1919, with the number so employed in December, 1913, the following data are given: Total number employed in December, 1913, 230,538; in December, 1919, 201,648. In industrial establishments there were 412,462 persons employed at the first date and 289,172 at the latter date.

In December, 1918, the number of unemployed persons to whom unemployment aid was being furnished exceeded 800,000. By the end of 1919 this number had been reduced to 120,000. On June 29, 1919, unemployment benefits paid for the two preceding weeks amounted to 12,353,015 francs (\$2,384,131.90, par) and for the two-week period ending November 16, 1919, the amount of such benefits was 5,298,122 francs (\$1,022,537.55, par).

CANADA (NOVA SCOTIA).—*Department of Public Works and Mines. Annual report on the mines, 1919. Halifax, 1920. 74 pp.*

States that during the year ending September 30, 1919, there were 20 fatal accidents in coal mines, which was a decrease of 102 when compared with 1918, during which year one explosion caused 88 deaths. The death rate per one thousand men employed in coal mines was 1.86 as compared with 11.77 for the preceding year. The number of men employed in the coal mines for the year ending September 30, 1919, was 12,925.

— (ONTARIO).—*Department of Labor. Mother's allowances; an investigation. Toronto, 1920. 126 pp.*

A summary of the contents of this report is published on pages 170 and 171 of this issue of the MONTHLY LABOR REVIEW.

DENMARK.—*Arbejdsanvisningsdirektøren. Indberetning for Finansaaret 1918-1919. Copenhagen, 1920. 15 pp.*

The report of the director of the Danish employment exchanges for the fiscal year 1918-19 shows the existence of 62 labor exchanges. These exchanges received 92,582 applications for positions, and placed 25,855 persons. The cost of the system was 284,149.80 crowns (\$76,152.15, par), or 10.99 crowns (\$2.95, par) per person placed.

FRANCE.—*Ministère du Travail et de la Prévoyance Sociale. Direction du travail. Encouragements aux sociétés coopératives ouvrières de production et aux sociétés coopératives de consommation. Lois, décrets, statuts. Paris, 1919. 60 pp.*

Laws, decrees, and statutes regarding assistance to workmen's societies of cooperative producers and cooperative consumers.

GREAT BRITAIN.—*Board of Trade. Industrial Life Assurance Committee. Report on the business of industrial assurance companies and collecting societies. London, 1920. 25 pp. Cmd. 614. Price, 4d. net.*

— — — — — *Standing committee on the investigation of prices. Profiteering act, 1919. Report on metal bedsteads. London, 1920. 6 pp. Cmd. 607. Price, 1d. net.*

— — — — — *Report on motor fuel. London, 1920. 10 pp. Cmd. 597. Price, 2d. net.*

— — — — — *Report on the standard boot and shoe scheme. London, 1920. 4 pp. Cmd. 592. Price, 1d. net.*

— *Exchequer and Audit Department. National insurance (health) acts, 1911 to 1917. National health insurance fund accounts for the year ended 31st December, 1917. Accounts of the national health insurance fund (England), the Welsh national health insurance fund, the Scottish national health insurance fund, and the Irish national health insurance fund established pursuant to sections 54 (1), 82 (2), 80 (2), and 81 (2), respectively, of the National Insurance Act, 1911 (1 and 2 Geo. 5, C. 55), showing the receipts and payments during the year ended 31st December, 1917; together with the report of the comptroller and auditor general thereon. London, 1920. 37 pp. 1s. Price, 4 d. net.*

GREAT BRITAIN.—Home Office. *Labor administration in America. Notes of inquiries made by Home Office representatives attending the Washington Labor Conference.* London, 1920. 16 pp. Cmd. 606. Price, 2d. net.

— Ministry of Food. *Committee on the wholesale food markets of London. First report.* 23rd February, 1920. London, 1920. 8 pp. Cmd. 634. Price, 1d. net.

— Ministry of Health. *National health insurance. The national health insurance (medical benefit) regulations, 1920, made by the Minister of Health under the national insurance (health) acts, 1911 to 1919.* London, 1920. 57 pp. 31. Price, 6d. net.

— National health insurance bill, 1920. *Report by the Government actuary upon the financial provisions of the bill.* London, 1920. 10 pp. [Cmd. 612.] Price, 2d. net.

— Ministry of Labor. *General statement of the work of the employment department.* London, February, 1920. 9 pp. Chart. 369.

This is the statement of 1918, brought up to date and reissued in February.

— Unemployment insurance bill. *Further memorandum explanatory of the financial provisions.* London, 1920. 3 pp. Cmd. 605. Price, 1d. net.

— Unemployment insurance bill, 1920. *Memorandum on financial clauses.* London, 1920. 2 pp. Cmd. 604. Price, 1d. net.

— Finance department. *National insurance (unemployment) acts, 1911 to 1918. Unemployment fund account, 1917-18. An account of the unemployment fund established pursuant to section 92 (1) of the national insurance act, 1911 (Part II). 1 and 2 Geo. 5, C. 55, showing the receipts and payments during the period 15th July 1917, to 15th July 1918; together with the report of the comptroller and auditor general thereon.* London, 1920. 6 pp. 7. Price, 1d. net.

— Ministry of Pensions. *Report of Mr. Marlay Samson, an officer of the Ministry of Pensions appointed to hold a public inquiry into the conduct of the East India local war pensions committee.* London, 1920. 36 pp. Cmd. 575. Price, 3d. net.

— Second annual report from 31st March, 1918, to 31st March, 1919. London, 1920. 90 pp. 39. Price, 9d. net.

— National Insurance Audit Department. *National insurance (health) acts, 1911 to 1918. Sixth report on the work of the department.* 1919. London, 1920. 18 pp. Cmd. 629. Price, 2d. net.

— Oversea Settlement Committee. *Report for the year ended 31st December, 1919.* London, February, 1920. 19 pp. Cmd. 573. Price, 3d. net.

— Parliament. House of Commons. *Standing Committee A. Report on the coal mines (emergency) bill, with the proceedings of the committee.* London, 1920. 12 pp. 36. Price, 2d. net.

— Registrar of Friendly Societies. *Reports for the year ending 31st December, 1918. Part A, General Report.* London, 1920. vi, 72 pp. Price, 9d. net.

— Treasury. *Staffs employed in Government departments. Statement showing the staffs of Government departments on 1st January, 1920, compiled from returns furnished to the Treasury.* London, 1920. 3 pp. Cmd. 546. Price, 1d. net.

— (IRELAND).—Local Government Board. *Annual report for the year ended 31st March, 1919.* Dublin, 1920. lxx pp. Cmd. 578. Price, 4 d. net.

ITALY.—*Laws, statutes, etc. Compulsory insurance against unemployment in Italy. Royal decree, 19th October, 1919. Translation of text, with explanatory notes. Issued by the Ministry of Labor (Intelligence and statistics department) of Great Britain.* London, 1920. 16 pp. Cmd. 613. Price, 2d. net.

A digest of this decree was issued in the MONTHLY LABOR REVIEW for April, 1919, pages 191-198.

LEAGUE OF NATIONS.—*International Labor Conference. Draft conventions and recommendations adopted by the conference at its first annual meeting, 29 October-29 November, 1919. (Authentic texts.)* London, 1920. 38 pp. Cmd. 627. Price, 6d. net.

French and English text in one pamphlet.

NETHERLANDS.—*Central Bureau voor de Statistiek. Verslag, 1917, 1918. The Hague, 1918, 1919. 2 vols. 38, 44 pp.*

NETHERLANDS.—*Centrale Commissie voor de Statistiek. Jaarverslag, 1917, 1918. The Hague, 1918, 1919. 2 vols. 79, 160 pp.*

The four volumes listed in this and the preceding entry comprise the administrative reports of the Central Statistical Organization of the Netherlands, and its advisory commission for the years 1917 and 1918. All official statistics are centralized in this bureau and its advisory commission.

— (AMSTERDAM).—*Arbeidsbureau. Elfde Jaarverslag, 1918. [Amsterdam, 1919.] 8 pp. (Reprint from Verslag van den Toestand der Gemeente Amsterdam over 1918.)*

At the beginning of 1919 there were 9,426 employees on the pay roll of the department of public works and the various municipal establishments of the city of Amsterdam. Of that number 8,409 had been full-time workers, i. e. had worked 300 days per year during the year 1918. The average weekly wages in all departments and establishments increased from 15.54 florins (\$6.25, par) in 1913 to 28.27 florins (\$11.36, par) during the first half of 1919. The average weekly wage is nearly the same in all departments, judging from the figures shown for 1919.

— *Gemeente arbeidsbeurs. De Amsterdamsche arbeidsbeurs; Haar geschiedenis, haar huidige werkwijze en haar toekomst. Amsterdam [1919], 66 pp., illustrated.*

An account of the history and present work of the municipal labor exchange of Amsterdam issued on the occasion of the opening of the new quarters in 1918.

— *Verslag betreffende de Gemeente-arbeidsbeurs te Amsterdam over het jaar 1918. [Amsterdam, 1920.] 68 pp. plates. Verslagen van bedrijven, diensten en commissiën der Gemeente Amsterdam, 1918, No. 2.*

Report of municipal labor exchange of Amsterdam for the year 1918.

NEW ZEALAND.—*Registrar-general's office. Statistics for the year 1918. Volume I. Blue book. Population and vital statistics. Law and crime. Wellington, 1919. 295 pp.*

NORWAY.—*Stats Småbruk-og boligbank. Beretning om den Norske arbeiderbruk og boligbanks virksomhet, 1ste juli 1913 til 30te juni 1918. [Christiania, 1914-1919.] 5 vols. Stortings meddelelser, No. 1, 1914-1919; 1916 published as Stortingsproposition no. 155.*

The above reports comprise the operations of the Norwegian housing and small-holdings loan bank, the function and work of which are described in Bulletin 158 of this Bureau.

The operations of the bank since its creation in 1903 are summarized in the table below:

OPERATIONS OF THE NORWEGIAN SMALL-HOLDINGS AND HOUSING LOAN BANK OF NORWAY, JULY 1, 1903 TO JUNE 30, 1918.

[One crown at par=26.8 cents.]

Fiscal year ending June 30—	Loans for—					
	Small-holdings.		Housing.		Total.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
		<i>Crowns.</i>		<i>Crowns.</i>		<i>Crowns.</i>
1905 ¹ (½ years).....	1,074	1,431,750.00	1,038	1,322,850.00	2,112	2,754,600.00
1906.....	1,526	1,900,250.00	953	1,146,250.00	2,479	3,046,500.00
1907.....	1,419	1,835,480.00	786	986,620.00	2,205	2,822,100.00
1908.....	1,359	1,849,500.00	786	1,021,187.00	2,145	2,870,687.00
1909 (½ years).....	1,469	2,079,100.00	985	1,365,000.00	2,454	3,444,100.00
1910.....	1,345	1,906,050.00	961	1,263,600.00	2,306	3,269,650.00
1911.....	1,701	2,482,550.00	1,266	1,899,800.00	2,967	4,382,350.00
1912.....	1,686	2,613,750.00	1,367	2,034,760.00	3,053	4,648,500.00
1913.....	1,561	2,548,300.00	1,318	2,045,250.00	2,879	4,593,550.00
1914.....	1,712	2,812,100.00	1,578	2,557,250.00	3,290	5,369,350.00
1915.....	1,043	1,751,150.00	757	1,201,700.00	1,800	2,952,850.00
1916.....	1,495	2,632,100.00	1,228	2,043,650.00	2,723	4,675,750.00
1917.....	1,356	2,378,050.00	1,149	1,852,450.00	2,505	4,230,500.00
1918.....	476	800,050.00	273	432,500.00	749	1,232,550.00
Total.....	19,222	29,020,480.00	14,445	21,293,857.00	33,667	50,314,337.00

¹ Fiscal year ending Mar. 31.

OPERATIONS OF THE NORWEGIAN SMALL-HOLDINGS AND HOUSING LOAN BANK
OF NORWAY, JULY 1, 1902 TO JUNE 30, 1918—Concluded.

Fiscal year ending June 30—	Repayments on—			Balance outstanding.
	Small-holdings.	Housing.	Total.	
	<i>Crowns.</i>	<i>Crowns.</i>	<i>Crowns.</i>	<i>Crowns.</i>
1905 ¹ (1½ years).....	1,077.00	1,175.00	2,252.00	2,763,348.00
1906.....	3,227.50	22,658.00	25,885.50	5,783,962.50
1907.....	11,230.29	48,791.02	60,021.31	8,556,041.19
1908.....	27,320.54	76,586.19	103,906.73	11,322,821.46
1909 (1½ years).....	55,891.28	128,937.61	184,828.89	14,582,092.57
1910.....	53,237.05	147,027.01	200,264.06	17,651,478.51
1911.....	124,249.38	215,497.40	339,746.78	21,694,081.73
1912.....	170,586.78	304,865.57	475,452.35	25,867,129.38
1913.....	179,314.18	326,382.51	505,696.69	29,954,982.69
1914.....	201,292.35	391,827.44	593,119.79	34,731,512.90
1915.....	215,297.12	385,912.88	601,210.00	37,083,152.90
1916.....	303,066.11	536,202.54	839,268.65	40,919,634.25
1917.....	468,294.76	790,610.17	1,258,904.93	43,891,229.32
1918.....	637,678.13	920,192.27	1,557,870.40	43,565,908.92
Total.....	2,451,762.47	4,296,665.61	6,748,428.08	.....

¹ Fiscal year ending Mar. 31.

SWEDEN.—*Pensionsstyrelsen. Allmänna pensionsförsäkringen år 1918. Stockholm, 1920. 43 pp.*

The Swedish pension law (June 30, 1913), the operations of which for the year 1918 are reported in the document listed above, provides an old-age pension for every citizen upon attainment of the age of 67 years or upon becoming incapacitated for work, and after paying premiums for a specified number of years. The base premium is 3 crowns per year; it is increased by graded amounts in proportion to annual income. All persons 15 to 66 years of age are required to insure and to pay premiums.

The number of individuals applying, in 1918, for pensions for the first time, was 27,924. The total number of requests was 38,942. Of these requests 27,220 were granted and payments made in the sum of 2,075,753 crowns (\$556,301.80, par). Certain supplementary pensions under special clauses of the law were also made to the amount of 30,813 crowns (\$8,257.88, par).

SWITZERLAND.—*Assemblée Fédérale. Message du Conseil fédéral à l'Assemblée fédérale concernant l'attribution à la confédération du droit de légiférer en matière d'assurance-invalidité, vieillesse et survivants, et la création des ressources nécessaires pour les assurances sociales. [Berne.] June 21, 1919. 238 pp.*

Message of the Federal Council to the Federal Assembly concerning the right of the Confederation to legislate in matters concerning invalidity, old-age, and survivors' insurance, and the creation of the necessary resources for social insurance.

Unofficial.

AMERICAN FEDERATION OF LABOR. *New Hampshire State Branch. Proceedings of the eighteenth annual convention, held at Rochester, July 15, 16, and 17, 1919. Rochester, Charles H. Bean, jr., secretary-treasurer, 1919. 54 pp.*

AMERICAN SOCIOLOGICAL SOCIETY. *The problem of democracy. Papers and proceedings, fourteenth annual meeting, held at Chicago, Ill., December 29–31, 1919. Chicago, University of Chicago Press, 1920. 295 pp. Publications. Volume XIV.*

Papers of special interest are on Organized labor and Democracy, by Matthew Woll, and Americanization, by Jane Addams.

AMERICAN WOOD WORKING MACHINERY COMPANY. *American woodworking machinery for vocational training. Rochester, N. Y., 1920. 162 pp. Illustrated.*

ARNOT, R. PAGE. *Trade unionism: A new model.* London, Independent Labor Party, 1919. 16 pp.

Characterizing branch unions and craft unions as especial weaknesses in the system of modern British trade unionism, the author advocates industrial unionism as a means of correcting these weaknesses and making the trade-union an effective force. According to this plan the workshop is made the unit of organization. It includes also the creation of a district committee in each industry based upon the shop as its unit and forming a part of a district labor council representing all industries, and lastly a national industrial union made up of representatives of shop and district unions.

ASSOCIATION VALENTIN HAÛY POUR LE BIEN DES AVEUGLES. *Le retour à la terre du soldat aveugle. Avec une préface de Henri de Régner. Lettres des soldats aveugles offrant des exemples pratiques de réadaptation aux travaux agricoles, dédiés par l'Association Valentin Haüy aux agriculteurs blessés aux yeux qui veulent reprendre leur vie d'autrefois.* Paris, 1919. 55 pp. Illustrated.

A collection of letters written to the Association Valentin Haüy for the Benefit of the Blind, by blind soldiers, giving practical examples of their readaptation to agricultural labor.

BAYLE, F. *Les salaires ouvriers et la richesse nationale.* Paris, Dunod, 1919. 213 pp.

A discussion on modern systems of wage payments, including the Willans, Rowan, Taylor, and the Gantt systems. A chapter (V) is devoted to wages and war-time bonuses.

CANISY, CTE. DE. *La question ouvrière dans le Bassin de Briey.* Paris, Payot et Cie., 1919. 223 pp. Bibliothèque Politique et Economique.

Discusses the labor problem in the Bassin de Briey, which region, in 1913, supplied 70 per cent of the total iron output of France. The author believes the development of this region depends in great part upon the manner in which the labor question is settled.

CLEVELAND CHAMBER OF COMMERCE. *Committee on labor relations. Labor relations in Cleveland. A declaration of principles establishing a proper basis therefor.* [Cleveland] 1920. 5 pp.

States that public opinion is the most powerful force to bring about desired industrial conditions. The committee declares that employees should not intentionally restrict individual output in order to create an artificial scarcity of labor as a means of increasing wages or continuity of employment, and that employers should not restrict production to create an artificial scarcity of product in order to increase prices. The report considers production, wages, hours of work, working conditions, collective bargaining, open or closed shop, information and frankness, coercive measures, and settlement of labor disputes. The committee states that "the employees' right to strike and the employer's right to lock out his employees are both secondary to the public's right to service."

CONFERENCE OF STATE AND PROVINCIAL HEALTH AUTHORITIES OF NORTH AMERICA. *Proceedings of the thirty-fourth annual meeting, held at Atlantic City, N. J., June 6-7, 1919.* Concord, N. H., The Rumford Press, 1919. 142 pp.

Among the articles of interest to labor are recent developments in the United States in favor of health insurance, by John B. Andrews; Recent developments in the United States in opposition to health insurance as a national policy, by Dr. George E. Tucker, and Health insurance as a means of organized practice of medicine, by John A. Lapp.

DAVIS, PHILIP, ED. *Immigration and Americanization. Selected readings.* Boston, Ginn & Co., [1920.] 770 pp.

A handbook of addresses and articles on all possible phases of the subjects of immigration and Americanization, designed to meet the general public need of a summarization of the best literature upon these topics. The selections are arranged in two parts: Book I, Immigration; Book II, Americanization, and present both a

chronological and a logical development of the subject matter. As the value of this collection has been tested in courses for teachers of immigrants at Boston University, it is believed that it will prove useful in similar courses elsewhere.

DODD, EDWARD L. *Some dangers in establishing a pension system and the proper precautions.* Austin, Texas, January 20, 1919. 26 pp. *University of Texas Bulletin* No. 1905.

This paper undertakes to point out a few of the large features of pensions, in accordance with the author's belief that "it is possible to establish a pension system which will be equitable to all employees, present and future, and will be a great blessing to them," and in conclusion states certain propositions which he considers essential to a clear understanding of such a system.

DOUGLAS, PAUL H. *Absenteeism in labor.* New York, *Academy of Political Science*, 1919. Pp. vii 678. Reprinted from *Political Science Quarterly*, Vol. XXXIV, No. 4, December, 1919.

Considers the amount, losses, and causes of absenteeism, and suggests methods of reducing it. The losses are classified as (a) machinery or equipment rendered less efficient by the absence of the worker, (b) extra administrative and clerical force required, (c) lessened productivity of the absentee's associates, and (d) loss of profit upon the labor of the workman himself. The most important causes are given as sickness and ill health, accidents, long hours, women in industry, nature of the employment, prevalence of other work, payment of overtime bonus, lack of materials, climatic conditions, housing conditions, inadequate transportation facilities, liquor, wage income higher than standard of living, and separation of interests between workman and employer. In order to reduce the amount of absenteeism, the author suggests the establishment of efficient employment departments, the investigation of absences, the imposition of fines for tardiness and absence, and payment of bonuses for attendance, the improvement of working and social conditions, the cultivation of the cooperative spirit between employer and workmen, prohibition, competitive devices to stimulate interest, and a shorter working-day with the omission of the overtime bonus.

GARTON FOUNDATION. *The industrial council for the building industry. The story of a revolution in industrial development, together with the full text of the Foster report on organized public service in the building industry.* London, Harrison and Sons. 153 pp.

HILDEBRAND, KARL, COMP. *De Svenska Statsmakterna och Krigstidens Folkhushållning August, 1914-1918. Stockholm, 1916-1919. 4 vols.*

This is a compilation, under official authority, of Swedish experience during the war in the general field of industrial control, but emphasizing particularly the work of the Government regulating the food supply. The headings of the principal chapters indicate the scope of the work: (1) State loans and financing; (2) Money and banking; (3) Production and distribution of necessities; (4) Railroads and communication; (5) Tariffs, etc. There is an abundance of material on prices and unemployment.

HOBSON, S. G. *National guilds and the State.* London, G. Bell & Sons, Ltd., 1920. xix, 406 pp.

HODGKIN, MARGARET. *Factory work for girls.* New York, The Woman's Press, 1920. 84 pp.

INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY. *Building Trades Parliament. Annual meeting, in London, August, 1919. Minutes of proceedings [and Appendices B1 and B2].* [London, 1919.] 51, 8 pp.

This report of proceedings includes as appendices (a) The interim report of the building resettlement committee on the supply of building labor for the Government housing schemes; (b) Organized public service in the building industry; (c) First report of the safety and welfare committee. The supplementary pamphlet includes appendices omitted from the original report.

INDUSTRIAL COUNCIL FOR THE BUILDING INDUSTRY—*Quarterly meeting, November, 1919. [London, 1919.] 12 pp.*

A brief summary of the report on apprenticeship will be found on pages 119 to 122 of this issue of the REVIEW.

INTERNATIONALES SEKRETARIAT DES PERSONALS IN ÖFFENTLICHEN DIENSTEN UND BETRIEBEN. *Protokoll des Internationalen Kongresses des Personals in öffentlichen Diensten und Betrieben abgehalten in Amsterdam am 20., 21., und 22. Oktober, 1919. Berlin, 1920. 32 pp.*

A digest of the proceedings of the international congress of workers and employees in public services held at Amsterdam Oct. 20 to 22, 1919. The congress was attended by delegates of organizations from Belgium, Denmark, Germany, England, France, the Netherlands, Norway, and Sweden, representing 456,000 members. A large part of the discussions was taken up by controversies between the French and Belgian delegates on the one side and the German delegates on the other over the attitude of the international secretariat, which during the war was located in Berlin, toward the deportation of French and Belgian workers. These controversies were finally settled by a declaration of the German delegation satisfactory to the French and Belgian delegates. The former international secretary was given a vote of confidence, but still the congress resolved to move the secretariat to Amsterdam and elected N. Van Hinte (Holland) secretary. The congress elected a commission charged with the drafting of new by-laws and of a program of activities. The annual contributions per member and per year were fixed at 5 pfennings (1.2 cents, par) for Germany, 3 cents (1.2 cents, par) for Holland, 6 centimes (1.2 cents, par) for France and Belgium, and at equivalent amounts for all other countries. A resolution was adopted advocating the creation of a central organization for municipal workers in those countries in which such a central organization does not yet exist. It was also resolved to draft the new by-laws in such a manner that class conscious organizations of salaried public employees would be permitted and encouraged to affiliate with the international union.

KANEGAFUCHI SPINNING COMPANY (LTD.) (JAPAN). *Its constitution; how it cares for its employees and workers. Tokio, October, 1919. 108 pp. Tables.*

LABRY, RAOUL. *Une Législation Communiste. Recueil des lois, décrets, arrêtés principaux du gouvernement bolchéviste. Paris, Payot et Cie., 1920. XVIII, 590 pp.*

This is a collection of legislative measures enacted by the soviet government of Russia, including a few decrees issued by the Union of the Communes of the Northern district and of Moscow. There is a section devoted to Labor laws, Labor inspection service, Wages, and Social insurance.

LEGAL AID SOCIETY (NEW YORK CITY). *Forty-fourth annual report for the year 1919. New York, 1920. 78 pp.*

LEMAIRE, FERN. *Questions de régimes de salaires et d'organisation industrielle. Modes de rémunération. Salaires à primes. Taylorisme. Second edition. Liège, Imprimerie Henri Mambourg, [1920?] 124 pp.*

This volume discusses the various methods of wage payment and their effect on output and cost of production, the four chapters being devoted respectively to (1) maximum production; (2) traditional methods of wage payments; (3) premiums; and (4) the Taylor system.

MAXEINER, STANLEY R. *War contributions to industrial surgery. In Modern Medicine, Vol. II, No. 3. Chicago, Modern Hospital Publishing Company, March, 1920. Pp. 231-235.*

Advocates among other measures in industrial surgery more attention and better care of the slightly injured, the use of antitetanic serum in all industrial accident cases with abrasions of the skin, and the establishment of schools for the reeducation of the industrial cripple. This paper was read before the Hennepin County Medical Society, Minneapolis, January 14, 1920.

MERRICK, DWIGHT V. *Time studies as a basis for rate setting.* New York, The Engineering Magazine Co., 1919. 366 pp.

MUKHERJI, P. *The Cooperative Movement in India. Second edition.* Thacker, Spink & Co., Calcutta and Simla, 1917. 453 pp. *Indian Citizen series.*

Since March 25, 1904, the date on which the Cooperative Credit Societies Bill was passed, the growth of the cooperative movement in India has been rapid. In 1915 there were 17,327 cooperative societies, having 824,469 members, and capital to the amount of Rs. 8,96,61,722 (\$29,088,952, par). Since India is primarily agricultural, it is not surprising that of the above number 15,861, or about 92 per cent, are agricultural credit associations. The author points out that even this number is inadequate since there are in India 220,000,000 agriculturists to be financed. It is stated that by the aid of these associations "laborers have become owners; hopeless debt has been banished, and the money lender driven out; agriculture and industry have been developed, and the villagers in the poorest tracts have become prosperous; the illiterate man has turned toward education and the drunkard has been reclaimed; the middleman has been eliminated, the raiyat is getting full value for his produce and paying his rent with ease; village life has been stimulated by associated action and by the business education of the bank; punctuality, thrift, and mutual confidence are being taught; litigation has decreased, and morality has improved; activity has taken the place of stagnation and routine; associated action has replaced mutual distrust."

The book contains a discussion of the various types of societies, such as the cooperative stores, farmers' marketing and supply societies, housing associations, etc.

The greatest obstacle to the growth of cooperation, the author states, is the illiteracy of the people.

NATIONAL INDUSTRIAL CONFERENCE BOARD. *Changes in the cost of living, July, 1914–November, 1919.* Boston, December, 1919. 24 pp. *Research report No. 25.*

This report is reviewed on pages 88 and 89 of this issue of the MONTHLY LABOR REVIEW.

— *Conciliation and arbitration in New Zealand.* Boston, December, 1919. 46 pp. *Research report No. 23.*

A brief review of this report appears on pages 216 to 218 of this issue of the MONTHLY LABOR REVIEW.

— *A works council manual.* Boston, February, 1920. 32 pp. *Research report No. 26. Supplemental to Research report No. 21.*

This manual supplementing Research report No. 21, which was reviewed in the MONTHLY LABOR REVIEW for January, 1920, pp. 191, 192, is designed for the use of employers who wish to introduce works councils in their establishments. It outlines the procedure to be followed in instituting the different types of shop committee plans, and the appendixes give model drafts of constitutions for large and small establishments and several charts showing methods of procedure of the committees.

NATIONAL TUBERCULOSIS ASSOCIATION. *Transactions of the fifteenth annual meeting, Atlantic City, N. J., June 14, 16, and 17, 1919.* New York, 381 Fourth Avenue. [1920.] 606 pp.

NICHOLSON, J. SHIELD. *Inflation.* London, P. S. King & Son (Ltd.), 1919. 143 pp.

This book treats of the inflation of the currency as a result of the excess of public expenditure over the revenue of the country and the abandonment of the gold standard. The effect of this inflation upon wages and upon industrial unrest is discussed, and the author argues that the working classes will gain far more by a general fall in prices than by a continued rise in wages.

PARKER, CARLETON H. *The casual laborer and other essays.* N. Y., Harcourt, 1920. 199 pp.

Of this series of four articles, three, entitled "The casual laborer," "The I. W. W.," and "Motives in economic life," have previously appeared as magazine articles. The first essay, "Toward understanding labor unrest," written by Mr. Parker shortly

before his death, is published for the first time. The purpose of this essay is to show that the causes of labor unrest are largely psychological, that labor unrest is the result of the repression of normal instincts and is fundamentally the same as discontent appearing in other fields of activity. The social environment of the casual worker, it is claimed, is such that he seeks compensation for social inferiority in strikes and sabotage, the reaction being defined as an ordinary mental disease of a functional kind. The remedy suggested is to adopt a new standard of normality, the first step in this direction being to break down inhibitions to free experimental thinking.

Mr. Parker's report of the wheat and hop fields riot of 1913, made to Hiram W. Johnson, then Governor of California, is published as an appendix to the volume.

ROBERTS, RICHARD. *The unfinished program of democracy.* London, The Swarthmore Press (Ltd.). [1919.] 326 pp.

ROBERTSON, JAMES. *Labor unionism based upon the American shop-steward system.* Portland, Oreg. [1920.] 16 pp. Chart.

An explanation of the shop-steward movement in terms of industrial unionism.

SAFETY INSTITUTE OF AMERICA. *Safety fundamentals. Lectures given on alternate Saturday mornings from Feb. 1 to June 7, 1919, for the benefit of factory inspectors employed by the city of New York, the States of New York and New Jersey, and insurance companies operating in and near New York City.* New York, 1920. 228 pp.

The subjects of these lectures are The body which gets hurt, The injured body and its treatment, Protective clothing for men, Suitable work garments for women in industry, Safe heads and good eyes, Guarding machinery, Arrangement of machinery and working places, Heating and ventilation, Illumination, Nature's forces for and against workmen, and Safety education and shop organization.

SAMVIRKENDE FAGFORBUND. *Beretning om de Virksomhed, 1. April 1918—31. Marts 1919.* Copenhagen, 1919. 195 pp.

Annual report of the Danish Federation of Labor for the fiscal year ending March 31, 1919. The statement of the report concerning hours of labor is given on pages 108 and 109 of this issue of the MONTHLY LABOR REVIEW.

SCHIFF, MORTIMER L. *Profit-sharing.* New York, 1919. 24 pp. Reprinted from the *New York Times*, October 5, 1919.

SECRIST, HORACE. *Statistics in business, their analysis, charting, and use.* New York, McGraw-Hill Book Company, Inc., 1920. 137 pp.

The essential kinds of information for business executives and the best methods of securing, classifying, tabulating, and summarizing facts are treated in this book. A classification of the outstanding and basic facts of business includes information of various kinds about labor, capital, production, population, markets, land and building, transportation, and laws and policies. A section of bibliographical comments includes a number of Government publications such as the MONTHLY LABOR REVIEW, Monthly Summary of Commerce and Finance, and reports of several of the departments as among the most valuable sources of information on the particular subjects with which each deals.

STASSEN, DR. M. *La fatigue de l'appareil visuel chez les ouvriers mineurs.* Liège, 1914-1919. 233 pp.

This is a scientific study of the effect of underground work upon the organs of vision, with especial reference to coal mines.

STONE, GILBERT. *The British coal industry.* London and Toronto, J. M. Dent & Sons, (Ltd.), 1919. 188 pp.

The author's aim is to stimulate production as the chief remedy for the present deplorable condition of the coal industry in Great Britain. He gives an historical sketch, to date, of working conditions and legislation relating to the industry, together with "well-ascertained facts" as to the advantages or disadvantages of various theories

of management including statements of results obtained by other countries from trials of State control, etc.

Other chapters relate to output, export trade, the home consumer, and the final one to wages and disputes, quoting the laconic phrase of the Prime Minister, "With production we get prosperity; without it we starve."

STUDENSKY, PAUL. *Teachers' pension systems in the United States. A critical and descriptive study.* New York: D. Appleton & Co., 1920. 460 pp. *The Institute for Government Research. Studies in administration.*

This comprehensive study of the subject of teachers' pensions is divided generally into two parts: A discussion of the problem of teachers' pensions and an account of typical teachers' pension systems of to-day. Five appendixes deal with (1) comparative analysis of teachers' pension systems; (2) reference to laws, statistical reports etc., relative to all teachers' pension systems in the United States, by States; (3) laws providing for sound teachers' pension systems; (4) actuarial tables; (5) bibliography.

UNION SUISSE DU COMMERCE ET DE L'INDUSTRIE. *Rapport sur le Commerce et l'Industrie de la Suisse, 1918.* Zurich [1919]. 524 pp.

The annual report for the year 1918 of the Secretariat of the Swiss Industrial and Commercial Union on business conditions in the various branches of industry and commerce. In addition the volume contains general statistical data on the economic situation in Switzerland. A digest of economic measures taken by the Swiss Federal authorities and of similar measures taken by foreign governments during the period October 1, 1918, to June 30, 1919, is given in an appendix.

UNITED MINE WORKERS OF AMERICA. *The case of the bituminous coal mine workers as presented by the United Mine Workers of America to the President's coal commission appointed December, 1919.* Washington, 1920. 78 pp. Chart.

The report of the President's coal commission was summarized in the April issue of the REVIEW (pp. 40-50).

— *Proceedings of the twenty-seventh consecutive and fourth biennial convention.* Cleveland, Ohio, September 9, 1919. In three volumes. Indianapolis, Bookwalter-Ball Printing Co., 1919. 480, 996, 544 pp.

UNITED STATES STEEL AND CARNEGIE PENSION FUND. *Treasurer's and manager's ninth annual report for year ending December 31, 1919.* [Pittsburgh, 1920.] 8 pp.

VALDOUR, JACQUES. *La vie ouvrière. Observations vécues.* Paris, Arthur Rousseau, 1919. 390 pp.

A study of working conditions among miners in the northern and central portions of France.

VERBAND DER GEMEINDE- UND STAATSARBEITER. *Protokoll über die Verhandlungen des achten Verbandstages abgehalten vom 1. bis 6. September 1919 in Nürnberg.* Berlin, 1919. 183 pp.

The minutes of the eighth general meeting of the German Federation of Workers in State and municipal services held at Nuremberg September 1 to 6, 1919. The meeting adopted several important resolutions. It went on record as advocating the universal conclusion of collective agreements as a suitable means of doing away with the one-sided dictatorial fixing of wage and working conditions by the employer and his organs. It demanded decisive participation of the workers' representatives in legislation, State and municipal administration, and in the management of industrial establishments, the immediate socialization of all capitalistic enterprises, but particularly of mines, enterprises for the generation of power, iron and steel works, banks, and insurance companies. It condemned the works council bill as a piece of patchwork which does not give the works councils sufficient influence in the administration of State and municipal establishment nor remove the existing bureaucracy. The meeting adopted new by-laws for the federation and regulated anew the contributions of members as well as the strike, unemployment, and death benefits.

VERBAND DER GEMEINDE- UND STAATSARBEITER. *Reichssektion Gesundheitswesen. Neuzzeitliche Dienst- und Ausbildungsgestaltung des Pflegepersonals, by Dr. Jakobit, and Die Berufsausbildung des Krankenpflegepersonals, by Emil Dittmer. Berlin, 1920. 32 pp.*

Two papers read at the third conference of the section on hygiene of the German Federation of Workers in State and municipal services. Both papers deal with the working conditions and the occupational training of nurses.

— *Die Sozialisierungsbestrebungen im Staat und Gemeinde, by Emil Dittmer, and Das Betriebsrätegesetz, by Josef Weigl. Berlin, 1919. 31 pp.*

Two papers read at the eighth general meeting of the German Federation of Workers in State and municipal services. The first of these papers deals with proposals of socialization in the State and municipalities and the second with the works council law.

— *Die Tarifverträge in gemeinnützigen Betrieben. Berlin, 1919. 508 pp.*

A compilation of collective agreements concluded during the first half of 1919 by organizations of workers in German State and municipal services with communes, unions of communes, district, provincial and State authorities, monopolies, and employers' associations. The agreements included in the compilation cover 1,300 establishments employing about 110,000 workers.

VEREIN DER WOLLINDUSTRIELLEN MÄHRENS. *Bericht des Vereins erstattet in der 37 ordentlichen Hauptversammlung vom 12. Februar 1920. Brünn, 1920. 79 pp.*

The annual report for the year 1919 of the Association of Woolen Goods Manufacturers of Moravia. The association received reports from 49 establishments which before the outbreak of the war employed 17,189 workers, of which 7,841 were males and 9,348 females. On December 15, 1919, 48 of these establishments were operating while one had closed down temporarily. The total number of workers employed in the 48 establishments had decreased to 10,626. Of these 30 were working 3 days per week, 759 worked 4 days per week, 1,473 worked 5 days, and 8,364 worked 6 days per week. On December 22, 1919, the association concluded a collective agreement with the workers' organizations which is to remain in force up to June 30, 1920. The agreement provides for basic wages for all occupations and for premiums for pieceworkers. In addition the workers receive (1) a fixed cost of living bonus of 25 hellers (5.1 cents, par) per hour, (2) a bonus based on their weekly net earnings and amounting to between 100 and 140 per cent of these earnings, and (3) a family subsidy of 4 crowns (81.2 cents, par) per child and week, but not to exceed 20 crowns (\$4.06, par) per family. Time and a half is to be paid for overtime and holiday work and double time for Sunday work. The industry suffered greatly from lack of raw material and coal.

WORKERS' EDUCATION. *A symposium. Reprinted from the Shipbuilders' News and Navy Yard Employee, Brooklyn, N. Y., for September, 1919, by the Industrial committee of the department of research of the Young Women's Christian Association. New York, 1919. 13 pp.*

CONTENTS.—The Boston Trade Union College, by W. H. L. Dana; The new school for social research, by Charles A. Beard; The united labor education committee, by J. M. Budish; The workers' university, by Juliet Stuart Poyntz; Labor and education, by Frank Tannenbaum; Workers' education and the Young Women's Christian Association, by Mary L. Cady.

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MONTHLY LABOR REVIEW

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WASHINGTON

JUNE, 1920

Minimum Quantity Budget Necessary to Maintain a Worker's Family of Five in Health and Decency.

THE Bureau of Labor Statistics prepared primarily for the use of the Congressional Commission on Reclassification a tentative quantity and cost budget necessary to maintain a family of five in health and decency in Washington, D.C.¹ It is even more important to establish a quantity budget for the workingman's family than for the clerical family. Such a quantity budget is needed for the more accurate determination of the cost of maintaining a workingman's family in health and decency, and also for the more accurate calculation of changes in the cost of living. This tentative quantity budget for a worker's family constitutes the bureau's best estimate at this time of what should be included in the family budget of the workingman. The bureau was assisted in compiling this budget by the Committee to Study the Relationship of Standards of Living to Health, of the National Conference on Social Work, and especially by Miss Caroline L. Hunt, Office of Home Economics, United States Department of Agriculture.

Food.

IN THE determination of a proper family dietary there are two standards which must be assumed at the beginning: (1) A standard food requirement in calories per man per day; (2) a standard table giving the food-consuming capacity of women and children in terms of a common unit—the equivalent adult male.

It has been estimated that the number of calories needed by a man at moderately hard muscular work is 3,000 to 3,200 per day. About 10 per cent of the calorie value of food is wasted in preparation, cooking, etc., and also a small per cent of the food which enters the mouth is not digested or assimilated. Therefore, 3,500 calories purchased represents approximately 3,000 to 3,200 calories actually consumed. Experience indicates that it is necessary to purchase this amount of food per man per day in order to insure sufficient variety and quantity, both as to bulk and calorie content. If the housewife is a dietetic genius, 3,500 calories per man per day purchased in the market may be a liberal allowance.

The relative proportions of the food consumed by the husband, wife, and children have been determined approximately by laboratory experiments and by estimates taking into account the factors of age, sex, weight, occupation, and activity. A scale showing relative amounts of food consumed by men and women at different kinds of

¹ This budget was presented by Commissioner Royal Meeker as a progress report of the Committee to study the relationship of Standards of Living to Health at the annual meeting of the National Conference of Social Work, April 21, 1920. It was also the basis of that portion of his address dealing with cost of living which he delivered before the Group Living Conference at Lake Placid, N. Y., May 29, 1920.

work, such as hard muscular work, moderately active muscular work, light muscular work, and sedentary occupations, and by children of different sexes and ages, is available and could have been used in this instance but for the increased amount of labor which it would have entailed. In studies of such large scope as a country-wide cost-of-living survey, brevity is essential and the following abridged table of equivalent adult males has been found more practical and sufficiently accurate for general purposes and it has, therefore, been adopted for use by the Bureau of Labor Statistics:

Male, 15 years or over.....	1.00
Female, 15 years or over.....	.90
Children, 11 to 14 years, inclusive.....	.90
Children, 7 to 10 years, inclusive.....	.75
Children, 4 to 6 years, inclusive.....	.40
Children, under 4 years.....	.15

The following food budget has been drawn up for a family of five, including husband, wife, and three children—boy, aged 12; girl, 6; and boy, 2. According to the above standard the calorie requirement of a man is taken as 1; that of a woman is 0.9; a boy of 12 years, 0.9; a girl of 6 years, 0.4; and a boy of 2 years, 0.15. The combined food requirements of this family would be equal to that of 3.35 adult males.

The quantity food budget submitted here as representing the food requirements of the standard family of five was obtained by averaging the actual amounts of foods used by 280 families selected from the cost-of-living survey made by the Bureau of Labor Statistics. The families were selected for special food analysis because they averaged in size approximately 3.35 equivalent adult males, and in the neighborhood of 3,500 calories of food purchased per man per day. The food budgets in the Bureau's study were taken in great detail, giving, among other things, the amount of each article of food purchased for a year for each family scheduled. The 280 budgets used in this detailed calorie analysis represented about 25 cases from each of 11 representative cities.

The average food budget obtained from these 280 families was then carefully considered from the standpoint of health. For the most part this average budget contains proteins, fats, and carbohydrates in sufficient quantities and in the right proportions. To make the average food budget acceptable to trained dietitians as a standard food budget, intended to maintain the standard family in health, it was necessary only to reduce slightly the quantity of meat and to increase slightly the quantities of whole milk, fresh vegetables, and fruits.

Quantity of Food for a Family of Five.

The proposed standard food budget submitted herewith, therefore, includes the kinds and, in a large degree, the quantities of food actually consumed by actual workingmen's families. The proposed standard budget has not been worked out by theoretical "experts" in the secrecy of the laboratory. It is made up of things which real people eat day by day throughout the year. It must not be hastily inferred that no improvement can be suggested in the workingman's diet because these workingmen's families ate sufficient food of about the proper kind. Only those families were included

in the special food analysis whose diets measured up to the calorie requirements of sound dietetics. Had the food budgets of all families been averaged together, the showing would have been quite different.

Following is the budget showing yearly quantities in pounds:

ANNUAL QUANTITY OF FOOD FOR A FAMILY OF FIVE, INCLUDING HUSBAND, WIFE, AND THREE CHILDREN (BOY AGED 12, GIRL 8, AND BOY 2).

Item.	Pounds.	Item.	Pounds.
Meat:		Sugars:	
Beef, fresh, steak.....	75	Sugar.....	163
roast.....	63	Corn sirup.....	
stew.....	47	Molasses.....	30
Beef, salt, corned.....	10	Honey.....	
dried.....	1	Candy.....	10
Veal, fresh, cutlet.....		Fresh fruits:	
roast.....	13	Apples.....	219
stew.....		Peaches.....	28
Pork, fresh, chops.....	30	Bananas.....	54
roast.....		Lemons.....	10
salt, bacon.....	19	Oranges.....	100
ham and shoulder.....	18	Grapes.....	14
side, dry.....	7	Berries.....	51
pickled.....	2	Cantaloupe.....	10
Mutton, chops.....		Watermelon.....	15
roast.....	26	Other fruit.....	36
stew.....		Grapefruit.....	32
Poultry, hens.....	23	Fruits, dried:	
Sausage.....	16	Prunes.....	24
Liver.....	10	Raisins, currants.....	11
Cooked meat, ham.....	8	Fruits, canned:	
bologna.....	10	Peaches.....	23
corned beef.....		Pineapple.....	2
Fish:		Berries.....	22
Fish, fresh.....	41	Jelly.....	
salt.....	5	Fruit butters.....	10
canned salmon.....	10	Vegetables, fresh:	
canned tuna.....	2	Potatoes, white.....	738
Oysters.....	5	sweet.....	48
Other sea food.....	6	Cabbage.....	82
Dairy products:		Spinach, kale, and other greens.....	78
Milk, whole.....	1,602	Peas.....	37
condensed, evaporated.....	65	Beans, string.....	130
Cream.....	3	Tomatoes.....	74
Ice cream.....	8	Onions.....	35
Butter.....	80	Corn.....	10
Cheese, American.....	14	Lettuce.....	7
cottage.....	6	Celery.....	24
Fats, mixed fats, vegetable oil, etc.:		Beets.....	52
Lard.....	37	Carrots.....	40
Crisco.....	7	Turnips.....	
Lard compound.....	13	Cauliflower.....	
Oleo.....	13	Parsnips.....	
Nut margarine.....	4	Peppers.....	27
Cottonseed oil.....	7	Asparagus.....	
Mazola, etc.....		Cucumbers.....	
Eggs.....	102	Radishes.....	
Cereals and their products:		Vegetables, dried:	
Flour, wheat.....	332	Beans, navy.....	24
rye.....	12	Peas.....	5
Graham.....	46	Beans, lima.....	15
Corn meal.....	25	Vegetables, canned:	
Hominy or grits.....	12	Beans, baked.....	5
Cream of Wheat.....	7	Peas.....	10
Corn flakes.....	4	Corn.....	19
Rolled oats.....	58	Tomatoes.....	25
Bread, wheat.....	457	Soup.....	5
rye.....	22	Miscellaneous:	
Graham.....	2	Chocolate.....	1
Rolls.....	22	Peanut butter.....	5
Crackers.....	18	Cocoa.....	5
Cake.....	15	Cornstarch.....	4
Pies.....	4	Tapioca.....	2
Macaroni.....		Tea.....	10
Spaghetti.....	33	Coffee.....	40
Noodles.....		Gelatin.....	1
Rice.....	44	Ice.....	12,800

125 pounds daily for four months, approximately June to September, inclusive.

Bureau of Labor Statistics and Department of Agriculture Budgets Compared.

The Department of Agriculture has prepared a quantitative estimate of weekly food supply for an average family, consisting of husband, wife, and three children under 14, whose ages total not less than 20 nor more than 24 years. The family on which the estimate is based is slightly larger in equivalent adult males than the family used in the food budget of the Bureau of Labor Statistics, and thus the amounts of food are somewhat higher than those required for the standard family. Nutrition experts of the Department of Agriculture recognize that the amount of fresh fruits and vegetables in its budget is possibly higher than absolutely necessary for health. For this reason a considerable difference in the two budgets exists in this food group. In all other classes of food the two budgets do not vary materially.

The following is a comparison of the Bureau of Labor Statistics food budget with the dietary standards established by the Department of Agriculture:

COMPARISON OF BUREAU OF LABOR STATISTICS AND DEPARTMENT OF AGRICULTURE BUDGETS SHOWING WEEKLY QUANTITIES OF FOOD EXPRESSED IN POUNDS OF FRESH AND EQUIVALENT WEIGHTS.

Article.	Bureau of Labor Statistics.	Department of Agriculture.
	<i>Pounds.</i>	<i>Pounds.</i>
Vegetables:		
Fresh, starchy.....	15.1	(1)
leafy.....	3.4	(1)
other.....	8.3	(1)
Canned.....	1.2	(1)
Dried (fresh weight ²).....	5.1	(1)
Fruits:		
Fresh.....	10.9	(1)
Canned.....	.9	(1)
Dried (fresh weight ²).....	4.0	(1)
Total, vegetables and fruits.....	48.9	70.0
Milk (14 quarts).....	30.8	30.8
Meats (except bacon and salt pork), fish, poultry, cheese, eggs, etc.....	11.8	10.5
Cereals and their products (flour, meal, rice, breakfast foods, macaroni, bread, ³ crackers, etc.).....	19.0	16.0
Sweets (sugar, molasses, ⁴ sirup, ⁴ etc.).....	3.9	4.5
Fats (butter, oil, lard, bacon, ⁵ salt pork, ⁵ cream, ⁵ etc.).....	3.7	4.0
Total (exclusive of tea, coffee, and condiments).....	118.1	135.8

¹ Vegetables and fruits are not subdivided in the Department of Agriculture's budget.

² 6 times dried weight equals fresh weight.

³ 1 pound of bread equals three-fourths pound of flour.

⁴ 1 pound of molasses, sirup, or candy equals three-fourths pound of sugar.

⁵ 1 pound of bacon or salt pork equals three-fourths pound of butter, and 1 pound of cream equals one-fourth pound of butter.

The Department of Agriculture employs fresh and equivalent weights in its estimate. One pound of dried fruit or vegetables is counted as six pounds of fresh, and the weight of cereals, sweets, and fats is converted to equivalent pounds of flour, sugar, and butter, respectively. For the purpose of comparison the Bureau of Labor Statistics budget has been computed by approximately the same method.

Variety of Foods Available in Different Seasons.

The food budget, however, in either of the forms in which it has been presented, does not offer to the social worker, or to the housewife, a practical guide in the purchasing of a health-producing diet-

ary. In order to assist in buying, or to serve as a check against quantities ordinarily purchased, the weekly quantities of the actual articles of food embraced in the budget have been segregated into (1) year-round foods, (2) special summer foods, and (3) those which will probably be used during the winter season when the price of fresh fruits and vegetables prohibits their purchase.

The budget as a whole consists of 5,961 pounds of food (dry weight) per year, or approximately 115 pounds per week for the family. About 100 pounds per week are articles of food of a more or less staple character which may be purchased at any season of the year. These foods have been placed in the year-round group, leaving 15 pounds of food per week to be made up from the seasonal groups. The foods which are abundant only in the summer season make up a weekly average of 7.6 pounds; those which are available in the winter season, 6.1 pounds. These averages, however, are on the basis of 52 weeks, and to ascertain the quantity per week of the season (approximately 26 weeks) in which they are to be used, it will be necessary practically to double the listed quantities of winter and summer-season foods. Following is the list of year-round, winter-season and summer-season foods, showing the average weekly quantity of each allowed in the budget.

AVERAGE WEEKLY QUANTITIES OF YEAR-ROUND, WINTER-SEASON, AND SUMMER-SEASON FOODS CONTAINED IN BUDGET.

Year-round foods.

Article.	Pounds.	Article.	Pounds.
Meat and fish.....	8.5	Sugar.....	3.1
Eggs.....	¹ 2.0	Corn sirup, molasses, and honey.....	.7
Milk, whole.....	² 30.8	Apples.....	4.2
Condensed and evaporated milk.....	1.2	Oranges.....	1.9
Cheese.....	.4	Bananas.....	1.0
Butter (including oleo and nut margarine).....	1.8	Potatoes.....	14.2
Lard, Crisco, and compounds.....	1.0	Sweet potatoes.....	.9
Flour.....	7.5	Cabbage.....	1.6
Corn meal.....	.5	Spinach, kale, and other greens.....	1.5
Rice.....	.8	Onions.....	1.4
Bread and rolls.....	9.6	Coffee.....	.8
Breakfast foods.....	1.3	Tea.....	.2
Cake and pies.....	.4	Miscellaneous.....	2.0
Crackers.....	.3		
Macaroni, spaghetti.....	.6	Total.....	100.2

Winter-season foods.³

Grapefruit.....	0.6	Navy beans.....	0.5
Prunes.....	.5	Lima beans.....	.3
Canned peaches.....	.4	Canned peas.....	.2
Canned berries.....	.4	Canned corn.....	.4
Carrots.....	1.0	Canned tomatoes.....	.5
Turnips.....	.8		
Beets.....	.5	Total.....	6.1

¹ 1.33 dozen.

² 14 quarts.

³ Quantities to be doubled during the winter season, November to April, inclusive.

AVERAGE WEEKLY QUANTITIES OF YEAR-ROUND, WINTER-SEASON, AND SUMMER-SEASON FOODS CONTAINED IN BUDGET—Concluded.

Summer-season Foods.⁴

Article.	Pounds.	Article.	Pounds.
Peaches.....	0.5	Tomatoes.....	2.5
Grapes.....	.3	Corn.....	.7
Berries.....	1.0	Lettuce.....	.2
Watermelon.....	.3	Miscellaneous vegetables.....	.5
Miscellaneous fruits.....	.7	Total.....	7.8
Peas.....	.2		
Beans, string.....	.7		

⁴ Quantities to be doubled during the summer season, May to October, inclusive.

In listing these foods and the average weekly quantities, it is not the intention to recommend that the housewife who buys food for a family of five should attempt to secure either these exact foods or the specified quantities. The articles and quantities will necessarily have to be treated with a large degree of elasticity. In the year-round foods, it will of course be advisable to vary the amounts according to the season, using more fats and carbohydrates during the winter and less during the summer when heat-producing foods are not so much required. Especially will this be true of fat meats, corn meal, macaroni, rice, beans, etc. On the other hand, eggs, apples, cabbage, spinach, kale, etc., although available throughout the year, will probably be used in greater quantities in summer than in winter.

On account of variations in the length of seasons in different sections of the country, as well as the overlapping of foods from one season to the other, a general grouping of seasonal foods is extremely difficult. Grapefruit, for instance, while primarily a winter fruit, may be secured in some of the months usually classed in the summer season. Many families also make it a practice to use navy and dried lima beans and canned fruits and vegetables in the summer as well as in the winter season.

The list will prove valuable only as a guide in suggesting the variety of foods available during the different seasons of the year and indicating something of the relative proportions in which they may be purchased in order to furnish a family of five with a dietary which will promote health.

Clothing.

THE level of health and decency in clothing has been interpreted as a level which not only takes into account the physical needs of warmth, cleanliness, and comfort, but also has such regard for appearance and style as will permit the family members to appear in public, and within their necessarily rather narrow social circle, with neatness and self-respect. In other words, the clothing standards of the family are intended to provide a fair degree of that mental satisfaction which follows being reasonably well dressed. But, while admitting the desirability of a more generous wardrobe, an effort has been made to allow only those quantities of clothing consistent with the *minimum* requirement for health and decency, and, where a doubt has existed, to err on the side of conservatism.

The clothing budget herewith presented has as its basis the clothing budgets of approximately 850 families having 3 children under 15 years of age, which were included in the survey of the Bureau of Labor Statistics in 1918-19. This basic material was first modified as the result of a large number of interviews with families in Washington, D. C. The material was then published in tentative form (*MONTHLY LABOR REVIEW*, December, 1919, pp. 22-29), as applying to the family of a clerical worker in Washington. Criticisms and suggestions from clothing experts all over the country have been received and that budget has been made over into the manual worker's family clothing budget here submitted. The clothing budget, like the food budget, is made up of the articles actually worn by real workers and their families. The modifications made in the average clothing budget of the families studied in order to arrive at a standard clothing budget are much more extensive than in the case of the food budget. The articles of clothing are the same in both the actual average budget and the proposed standard budget, but the quality of material and the yearly replacement in the latter have been determined very largely by special study.

The quantities listed in the clothing budget are the *annual replacements*, not the number of garments possessed at any one time. For example, in the husband's clothing budget the annual replacement of a summer suit is given as one-third, which means that one summer suit is expected to last three years. Allowance is made for the purchase of two winter union suits each year, but this does not mean that the worker possesses only two sets of winter underwear. He may have six sets or any other number, but with reasonable care he can manage comfortably by purchasing two suits a year.

In preparing this quantity budget, a considerable amount of sewing at home has been assumed as possible, and has been indicated accordingly. When more than the specified amount is done, a saving may be effected, or the family clothed more abundantly. On the other hand, where little or no home sewing can be done, the number of garments allowed will be barely sufficient to maintain decency. The investigations of the Bureau of Labor Statistics show that during the war clothing purchases of the average worker's family were considerably curtailed. When it is necessary to economize the expense for clothes may be greatly reduced for a season or two, but the effect of renewing the clothing budget after it has become depleted creates a serious situation in family expenditures.

In order to make the yearly clothing budgets more serviceable as a guide in buying, the annual replacements for each member of the family have been divided into year-round, summer, and winter clothing.

In basing the quantities of clothing on what has been considered reasonable length of wear, it has been necessary to assume that clothing purchased in conformity with this budget will be of good average quality.

Clothing Budget of a Family of Five.

The clothing budgets of the husband, wife, and 3 children are given below:

ANNUAL QUANTITY OF CLOTHING FOR A FAMILY OF FIVE INCLUDING HUSBAND, WIFE, AND THREE CHILDREN (BOY AGED 12, GIRL 6, AND BOY 2).

Husband.

Article.	Replacement per year.	Article.	Replacement per year.
<i>Summer clothing.</i>		<i>Year-round clothing—Concluded.</i>	
Hats, straw.....	1	Socks, cotton.....	12
Union suits.....	3	Shoes:	
Suits.....	$\frac{1}{2}$	Dress.....	$\frac{3}{4}$
<i>Winter clothing.</i>		Work.....	2
Hats, felt.....	$\frac{1}{2}$	Shoe repairing:	
Overcoats.....	$\frac{1}{2}$	Whole soles.....	1
Sweaters.....	$\frac{1}{2}$	Half soles and heels.....	$\frac{1}{2}$
Union suits.....	2	Rubbers.....	$\frac{1}{2}$
Suits.....	$\frac{1}{2}$	Gloves:	
Gloves, leather, street.....	1	Cotton, work.....	6
<i>Year-round clothing.</i>		Collars.....	6
Caps.....	1	Ties.....	2
Work trousers (or overalls).....	2	Handkerchiefs, cotton.....	8
Shirts:		Garters.....	2
Dress.....	1	Belts.....	$\frac{1}{2}$
Work.....	5	Suspenders.....	1
Nightshirts.....	2	Umbrellas.....	$\frac{1}{2}$
		Cleaning and pressing (suit).....	1
		Miscellaneous.....	(¹)

Wife.

Article.	Replacement per year.	Article.	Replacement per year.
<i>Summer clothing.</i>		<i>Year-round clothing.</i>	
Hats.....	1	House dresses.....	2
Skirts, cotton, wash.....	$\frac{1}{2}$	Aprons, kitchen (to be made at home).....	1
Waists, cotton (to be made at home).....	3	Corsets.....	2
Waist, dress.....	$\frac{1}{2}$	Corset covers.....	2
Dresses, cotton, thin (to be made at home).....	2	Combinations, muslin.....	2
Union suits.....	2	Brassieres.....	2
Petticoat, muslin.....	1	Nightgowns, muslin.....	2
Shoes, low.....	1	Kimonos.....	$\frac{1}{2}$
Gloves, cotton.....	1	Stockings, cotton.....	8
<i>Winter clothing.</i>		Shoe repairing:	
Hats.....	$\frac{1}{2}$	New heels.....	3
Suits, wool.....	$\frac{1}{2}$	Half soles and heels.....	1
Dresses, wool.....	$\frac{1}{2}$	Handkerchiefs, cotton.....	8
Coats, wool.....	$\frac{1}{2}$	Umbrellas.....	$\frac{1}{2}$
Petticoats (Venetian cloth or sateen).....	1	Rubbers.....	1
Union suits.....	1	Cleaning and pressing (suit).....	1
Shoes, high.....	1	Miscellaneous.....	(²)
Gloves (not kid).....	$\frac{1}{2}$		

Boy, 12 years of age.

Article.	Replacement per year.	Article.	Replacement per year.
<i>Summer clothing.</i>		<i>Year-round clothing.</i>	
Trousers, separate, cotton.....	2	Caps.....	2
Overalls.....	1	Suits, wool.....	1
Union suits.....	3	Shirts or blouses, cotton.....	5
Shoes, low.....	2	Pajamas or nightshirts.....	2
<i>Winter clothing.</i>		Stockings, cotton.....	12
Trousers, separate, wool.....	1	Shoe repairing (halfsoles and heels).....	5
Overcoats or mackinaws.....	$\frac{1}{2}$	Rubbers.....	1
Sweaters.....	$\frac{1}{2}$	Ties.....	2
Union suits.....	2	Handkerchiefs, cotton.....	6
Shoes, high.....	3	Garters (to be made at home).....	2
Gloves (knit).....	2	Belts.....	$\frac{1}{2}$
		Miscellaneous.....	(³)

¹ Lump sum of money equal to about 7 per cent of total cost of husband's clothes.

² Lump sum of money equal to about 8.5 per cent of total cost of wife's clothing.

³ Lump sum of money equal to about 3 per cent of total cost of 12-year-old boy's clothing.

ANNUAL QUANTITY OF CLOTHING FOR A FAMILY OF FIVE INCLUDING HUSBAND, WIFE, AND THREE CHILDREN (BOY AGED 2, GIRL 6, AND BOY 12)—Concluded.

Girl, 6 years of age.

Article.	Replacement per year.	Article.	Replacement per year.
<i>Summer clothing.</i>		<i>Winter clothing—Concluded.</i>	
Hats.....	1	Shirts.....	2
Dresses, cotton (to be made at home).....	6	Drawers, knit.....	2
Petticoats, muslin.....	2	Nightgowns, outing flannel.....	1
Shirts.....	3	Shoes, high.....	3
Drawers, muslin.....	5	Gloves or mittens (knit).....	1
Nightgowns, muslin.....	1		
Shoes, low.....	2	<i>Year-round clothing.</i>	
		Aprons (to be made at home).....	1
<i>Winter clothing.</i>		Underwaists.....	4
Caps or hats.....	1	Stockings, cotton.....	12
Dresses, wool (to be made at home).....	1	Rubbers.....	1
Coats, wool.....	1	Handkerchiefs, cotton.....	6
Sweaters.....	1	Garters.....	2
Petticoats, outing flannel.....	1	Miscellaneous.....	(4)

Boy, 2 years of age.

<i>Summer clothing.</i>		<i>Winter clothing—Concluded.</i>	
Hats, duck.....	1	Nightgowns, outing flannel.....	1
Undershirts.....	3	Shoes, high.....	2
Drawers.....	3	Mittens (knit).....	1
Nightgowns, muslin.....	1		
Shoes, low (sandals).....	2	<i>Year-round clothing.</i>	
		Dresses, cotton suits, rompers, overalls, etc. (to be made at home).....	8
<i>Winter clothing.</i>		Underwaists.....	4
Caps.....	1	Stockings and socks, cotton.....	10
Overcoats.....	1	Garters.....	2
Sweaters.....	2	Miscellaneous.....	(5)
Undershirts.....	2		
Drawers.....	2		

⁴ Lump sum of money equal to about 8.5 per cent of total cost of 6-year-old girl's clothing.

⁵ Lump sum of money equal to about 6 per cent of total cost of 2-year-old boy's clothing.

Individual tastes and variations in climate will of course make many changes and adjustments necessary for each family. Occupational requirements will also enter in, especially in the clothing budget of the husband. These variations could not be taken into consideration in preparing a general budget for a standard workingman's family.

It is highly important to consider the clothing budget of each individual member of the family. In the husband's clothing, for instance, allowance has been made for the purchase of only two pairs of work trousers or overalls each year. This appears small until considered in conjunction with the allowances for suits. A summer suit and a winter suit, each to last three years, have been allowed. In other words, the purchase of two suits in three years has been provided, which means that every 18 months on the average the workingman will be able to supplement his work clothes with one suit of discarded "dress up" clothes. Assuming that the workingman's "Sunday" clothes are not subjected to very hard use, these suits when ready for every-day wear may reasonably be expected to form the major part of his work clothing, and not more than two additional pairs of work trousers will be required each year. Since suit coats usually outwear

the trousers, no separate coats to wear with the work trousers have been deemed necessary.

No quantitative allowances have been made for raincoats, slippers, bathrobes, purse, repairs to watch, or any other item of clothing expense which occurs only occasionally. However, a lump sum of money equivalent to something like 7 per cent of the total cost of the husband's clothing has been allowed to cover purchases of this character.

In the wife's clothing, the two new house dresses to be purchased each year may prove inadequate, unless the old summer dresses of previous seasons are worn as everyday house dresses also.

Few women, especially where the climate permits of uniform underwear throughout the year, will wear all the varieties of underwear listed, i. e., winter union suits, summer union suits, combinations, corset covers, brassieres, petticoats, etc. However, the quantities listed under each are small, and where fewer kinds of articles are worn a larger quantity of each will be required.

This is distinctly a health and decency budget, with little provision for "style" or fashionable dress. No allowance has been made for an afternoon dress of silk, a silk petticoat, or silk stockings. Although these articles are doubtless desirable, a wool dress, a suit skirt with a dress waist, a Venetian cloth or sateen petticoat, and lisle or cotton stockings will supply all that is absolutely essential for health and decency.

To care for the multitudinous purchases of "extras," such as dress shields, veils, hair nets, hairpins, combs, slippers, hand bag, dress trimmings, thread, buttons, etc., a lump sum of money of about 8.5 per cent of the total cost of the wife's clothing has been suggested.

The clothing needs of growing children are almost beyond the ability of the budget maker to ascertain or estimate. A reasonably generous clothing allowance has been made for the children, but it is expected that some clothing will be handed down and made over for the younger children, in order to get along on the amounts specified.

In practically all the families visited in the Bureau of Labor Statistics' investigations there seems to be a general agreement that the expense for shoes and stockings for children is one of the serious drains on the family's finances. For the boy of 12, the budget allows for the purchase every year of three pairs of high shoes and two of low, with one repairing of half soles and heels for each of the five pairs. For the girl of 6 years, three pairs of high and two of low are allowed; for the boy of 2 years, two pairs of high shoes and two of sandals. In the case of the two younger children, shoe repairing is not considered feasible and provision has not been made for it.

Housing.

A HOUSING standard based upon health requirements must consider primarily air space, ventilation, lighting, sanitation, privacy, and proper separation of the sexes. In applying these requirements to particular dwellings, the factors to be taken into account are number of rooms per person, sanitary conveniences, floor space, window space, location, and frontage. The standard sug-

gested below is for urban industrial communities, and conforms quite closely to actual housing conditions existing in industrial centers of the country.

Number of Rooms.

Figures collected by the Bureau of Labor Statistics in the 1918-19 study indicated that the majority of workingmen's families of average size and average income lived in houses which furnished approximately one room per person. The families included in the survey were primarily Americans. No schedules were taken from non-English speaking families who had been in the United States less than five years. Families with boarders or more than three lodgers were excluded.

For 20 cities selected at random, and including all families scheduled regardless of size or income, those living in houses averaged 1.007 rooms per person, and those in flats and apartments 0.931 room per person. The standard health and decency budget must provide at the very least as many rooms per person as the average family were found to occupy. A housing standard of one room per person, exclusive of bath, has, therefore, been adopted as the minimum requirement consistent with health and decency.

For the average family of five persons a house of five rooms, consisting of living room, dining room, kitchen, and two bedrooms, should be provided as the minimum for health and decency. For the standard family, composed of husband, wife, and three children, boy aged 12, girl 6, and boy 2, three sleeping rooms are needed in order to secure reasonable privacy—one bedroom for the parents and two for the children, one for each sex. To meet this need the living room can be arranged so as to be adaptable for sleeping purposes. Several arrangements are possible. A very practical one would be to have three bedrooms, a living room, and a combination kitchen and dining room. Still another would give a combined living and dining room, kitchen, and three bedrooms, or two bedrooms and a "parlor." The latter arrangement is especially desirable as the children grow up and begin to receive visitors in the home.

Size of Rooms.

Thus far only the number of rooms has been considered. For purposes of health it may be conceded that floor space is of more importance than the mere number of rooms. The size of the various rooms adopted by the Bureau of Industrial Housing and Transportation of the Department of Labor, which undertook the war housing of the Government other than that required for shipbuilders, is given below.

	Minimum size.
Large bedroom.....	10 by 12 feet.
Small bedroom.....	8 by 10 feet.
Parlor or living room.....	10 by 12 feet.
Dining room.....	9 by 12 feet.
Kitchen (where there is no separate dining room).....	10 by 12 feet.

These standards are for the different rooms in detached, semi-detached, flat, or row houses and represent the combined judgment of 25 architects, sanitary inspectors, builders, and students of housing. It does not, however, seem advisable to incorporate in the housing

standard to be adopted rooms of exactly the size prescribed in the above specifications.

Especially is this true since the standard herewith presented permits of considerable variation in arrangement. If only two bedrooms are provided, both of them should be of the "large" type, 10 by 12 feet. For a family of five, the "small" bedroom, 8 by 10, will scarcely be practicable, unless three sleeping rooms are to be provided. Whether a combined kitchen and dining room, or a combined living and dining room, is selected, a room larger than 10 by 12 is desirable. Assuming any of the arrangements possible in a five-room house, approximately 560 square feet of floor space, exclusive of bath, is the minimum health and decency requirement for the standard family of five persons. When space is provided for bathroom, closets, hall, and storage space, the gross area of the standard house of five rooms has been fixed at 660 square feet. This gives little enough floor space for a family of five persons.

Light and Ventilation.

In the matter of light and ventilation the requirements set up by the Bureau of Industrial Housing and Transportation of the Department of Labor seem to be entirely satisfactory. The paragraphs on ventilation are as follows:

Every room to have at least one window opening directly to the outer air. Two windows in each room generally preferred; one window sufficient in small bedrooms. Each room to have a window area of not less than 12 square feet.

Cross ventilation as direct as possible to be provided for all rooms through windows, transoms, or doors; communicating door recommended between front and rear bedrooms in row houses.

Every bathroom to have window of not less than 6 square feet in area opening directly to the outer air.

Sanitation and Drainage.

In the 20 cities of the 1918-19 study of the Bureau of Labor Statistics selected, the families included over four-fifths of those in flats and apartments and over three-fifths of those in individual houses had inside water-closets. Over one-half of the families in both multiple dwellings and individual houses also had baths. It is felt that a housing standard which is to provide health and decency must include a complete bathroom, with toilet.

In connection with the standard house such drainage should be provided as will render impossible stagnant pools on the premises or the collection of water in the cellar or underneath the house.

Construction and Arrangement.

A house must, of course, be built in compliance with housing laws, local building codes, and ordinances. The roof must be water-tight, and the walls substantially and durably constructed so as to resist heat and moisture, according to the climatic conditions of the locality.

Accepting the constructional standards recommended by the Bureau of Industrial Housing and Transportation, the standard house should provide for closet or storage space. The halls, stairs, and doors should be so constructed and located as to permit of easy moving of the furniture.

Porches are highly desirable and should be durably constructed. In most latitudes the porches may be made to serve all the year around as an additional sleeping room.

Neighborhood and Surroundings.

It is presumed that the standard house for the workingman's family will be located in a neighborhood with reasonably well maintained streets, and fairly accessible to means of transportation, playgrounds, and places of amusement and recreation. What is commonly termed a "slum" would not supply the proper neighborhood surroundings for a house intended to provide the minimum requirements of health and decency.

Heat and Artificial Light.

IT HAS not seemed feasible to adopt any special form of heating for the standard workingman's house. There is a wide range of means by which adequate heating may be had. Whatever the method of heating, however, it should be such as to permit of heating the principal living room to a temperature of 68° F. in the coldest weather in any given locality. Small open grates in houses without double walls or air spaces, in States as far north as Pennsylvania, as were found in the company housing survey of the Bureau of Labor Statistics,² would not be in compliance with this standard.

Fuel consumption depends so much upon geographic location and climatic conditions that an attempt to establish minimum quantity standards seems impracticable. A definite standard for fuel would be complicated further by the various sizes and kinds of coal. In lighting, the various systems of gas, electricity, and kerosene offer another obstacle to quantity standards since the system used usually does not depend so much upon the desire of the family as upon the character and equipment of the house.

Furniture and Furnishings.

NO STANDARD quantity budget has yet been established for the upkeep of household equipment. The Bureau of Labor Statistics has, however, worked out a list of furniture, furnishings, and utensils necessary to equip completely a house of five rooms, living room, dining room, kitchen, and two bedrooms, occupied by the standard family of five persons. The list of articles, together with a brief description, is given below.

² The results of this survey are published in Bulletin 263 of the Bureau of Labor Statistics, now in press.

NECESSARY HOUSEHOLD EQUIPMENT.

Furniture.

Article.	Number.	Description.
Refrigerator.....	1	Smallest size and make sufficient in capacity for economical preservation of food and economy in the purchase of ice.
Tables:		
Dining room.....	1	Oak extension table, plain, durable quality.
Living room.....	1	Oak, plain, durable quality.
Kitchen.....	1	48-inch pine table, with 1 drawer.
Chairs:		
Dining room.....	6	Plain durable oak.
Bedroom.....	4	Strongly made.
Living room.....	4	Oak or other durable wood.
Kitchen.....	1	Painted wood.
High chair.....	1	
Rugs:		
Living room.....	2	Small Axminster rugs.
Dining room.....	1	Large Crex or Rattania.
Bedrooms.....	4	Rag or Crex rugs, 3 by 6 feet.
Gocart.....	1	Folding, with metal framework and cloth top.
Sewing machine.....	1	Standard make.
Settee or davenport.....	1	Oak or other durable wood, imitation leather upholstery.
Sideboard.....	1	Medium size, oak.
Bureaus.....	2	Plain bureau; 1 white painted bureau.
Chifonier.....	1	White painted wood.
Beds, mattresses, and springs:		
Double.....	1	Bedstead, plain (to match bureau); durable felt mattress, and spring.
Single.....	2	Each: White enameled bedstead; durable felt mattress, and spring.
Crib, mattress and spring.....	1	White enameled.

Furnishings.

Towels:		
Kitchen hand towels.....	3	Cotton.
Bath towels.....	10	Turkish.
Hand towels.....	12	Part linen.
Tablecloths.....	3	Cotton, to be hemmed at home.
Table cover.....	1	For use when table is not set.
Napkins.....	18	Part linen, 22-inch.
Blankets:		
Pair double-bed size.....	1	} Part wool.
Pairs single-bed size.....	2	
Pair crib size.....	1	
Comforts:		
Double-bed size.....	1	} Cotton, silk-aline covered.
Single-bed size.....	2	
Crib size.....	1	
Spreads:		
Double-bed size.....	2	} Good grade of rippelette, medium weight; number sufficient to provide for laundering.
Single-bed size.....	3	
Pillows:		
Ordinary size.....	4	} Mixed feathers.
Crib size.....	1	
Sheets:		
Double-bed size.....	4	} Number sufficient to provide for laundering.
Single-bed size.....	6	
Crib size.....	4	
Pillow cases:		
Ordinary size.....	8	} Number sufficient to provide for laundering.
Crib size.....	3	
Dish towels.....	8	Cotton, to be hemmed at home.
Table oilcloth.....	1	For pine table.

Utensils.

Laundry tubs.....	2	Medium size, galvanized.
Washboard.....	1	Zinc.
Wringer.....	1	Medium size.
Boiler.....	1	Medium size, with copper bottom.
Flat irons.....	3	4, 5, and 6 pound irons.
Mops.....	2	1 handle for scrub mop, and one 16-ounce dry mop.
Brooms.....	2	Good quality broom.

NECESSARY HOUSEHOLD EQUIPMENT—Concluded.

Utensils—Concluded.

Article.	Num- ber.	Description.
Dishes:		
50-piece set.....	1	Plain.
Water pitcher.....	1	Plain heavy glass.
Vinegar cruet.....	1	Do.
Oil cruet.....	1	Do.
Salt shaker.....	1	Do.
Pepper shaker.....	1	Do.
Tumblers.....	6	Plain.
Knives, forks, etc.:		
Butter knife.....	1	} Quadruple plated, plain.
Sugar spoon.....	1	
Knives.....	6	
Forks.....	6	
Teaspoons.....	12	} Good quality steel knife and fork, and sharpener.
Tablespoons.....	6	
Carving set.....	1	
Kitchen utensils:		
Refrigerator pan.....	1	Galvanized.
Ice pick.....	1	Small, with wooden handle.
Garbage pail.....	1	Galvanized, medium size.
Towel rack.....	1	Wood, with three rods.
Soap dish.....	1	Wire.
Dish pan.....	1	Enameled.
Dish drainer.....	1	Heavy wire, with plate holders.
Teakettle.....	1	Enameled.
Coffeepot.....	1	Gray enamel.
Teapot.....	1	Do.
Preserving kettle.....	1	Do.
Jelly glasses.....	36	With covers.
Fruit jars.....	36	Jars holding 1 quart.
Stewpans or kettles.....	2	Enameled.
Cake pans.....	2	Heavy, pressed tin.
Pie pans.....	2	Pressed tin.
Bowls.....	2	
Large bread pans.....	2	Pressed tin.
Bread-raising pan.....	1	Heavy tin, with cover.
Roasting pan.....	1	Medium size.
Bread box.....	1	
Frying pans.....	2	1 small pan, 1 medium-sized iron pan.
Double boiler.....	1	Enameled, holding 1 quart.
Muffin pan.....	1	Tin, for 1 dozen muffins.
Colander.....	1	Gray enamel.
Chopping bowl and knife.....	1	Medium-sized bowl, single knife.
Meat grinder.....	1	Medium.
Potato masher.....	1	Wire, with wooden handle.
Egg beater.....	1	Medium size and weight.
Grater.....	1	Tin.
Strainer.....	1	
Bread board.....	1	18 by 24 inches.
Large salt shaker.....	1	
Biscuit cutter.....	1	Tin.
Rolling pin.....	1	
Flour sieve.....	1	Medium size.
Measuring cup.....	1	Tin or aluminum.
Lemon squeezer.....	1	Glass.
Can opener.....	1	
Large knife.....	1	
Case knives and forks.....	3	
Paring knife.....	1	
Wooden spoon.....	1	
Mixing spoons.....	3	
Pancake turner.....	1	

This budget assumes the existence of an equipment of household furniture similar to the above, since it is generally true that married couples purchase the major part of their household furniture either at or shortly after marriage. Consequently, the problem is to provide only for the necessary annual upkeep.

Conclusions as to the amount necessary for the annual upkeep of furniture and household furnishings for a family of five have been based on approximately 100 schedules, showing one year's expenditures for furniture and furnishings, secured in 1918-19 by the Bureau of Labor Statistics from families consisting of husband, wife, and three children under 15 years of age, living in large Eastern or Middle Western cities, and having a total annual expenditure of \$1,500 and under \$2,100.

Inasmuch as the families studied spent annually from \$1,500 to \$2,100, they were presumably living at a fairly decent and healthful standard. Their household equipment, therefore, may be regarded as reasonably sufficient both in quantity and quality, although, of course, not luxurious. From the special study of the expenditures of these families for furniture and furnishings, the Bureau of Labor Statistics has calculated tentatively that the amount of annual upkeep of household equipment approximates 7 per cent of the total cost of purchase. In the budgets which the Bureau of Labor Statistics has prepared, the practice has been followed of ascertaining the approximate cost at current prices of the above list of household equipment and then allowing 7 per cent of the total renewal cost for annual upkeep. Such a figure, however, is of no use in determining a quantity standard, but it is a guide to the amount which should be allowed in the cost budget.

Miscellaneous.

UNDER miscellaneous expenditures a quantity standard is possible in only a limited number of items. Following are the principal miscellaneous items which must be provided for in the cost budget of the family:

Laundry work.	Amusements and recreation.
Cleaning supplies and services.	Newspapers.
Maintenance of health.	Organizations:
Insurance:	(a) Church.
(a) Life (disability).	(b) Labor.
(b) House and furniture.	Incidentals, including—
Car fare:	Tobacco.
Husband.	Telephoning and telegraphing.
Wife and children.	Stationery and postage, etc.

Expenditure for assistance with laundry work may not be considered possible in the family of an industrial worker. However, from the standpoint of health it seems that the mother of 3 children who must do the cooking for the family, the general cleaning of the house, the sewing and mending, the marketing and shopping, should be allowed assistance with the family laundry work and scrubbing, amounting to one day per week.

The following quantities seem to provide the minimum requirement of cleaning supplies and services to insure personal and household cleanliness:

Cleaning supplies and services.

Personal:	Quantity.
Toilet soap, small bar.....	90
Toothbrush.....	5
Toothpaste, tube or box.....	12
Combs, hard rubber.....	1
Hairbrushes.....	$\frac{1}{2}$
Shoe polish, box.....	6
Barber's services—	
Husband, hair cut.....	12
Children, hair cut.....	8
Household:	
Laundry soap, $\frac{1}{2}$ -pound bar.....	150
Starch, pound.....	6
Cleanser, box.....	36
Small lump sum for unspecified cleaning supplies and services, such as borax, ammonia, washing powder, bluing, insect powder, etc.	

Some allowance must, of course, be made for the maintenance of health. This item includes expenditures for physician, dentist, oculist, glasses, and drugs, including prescriptions and prepared remedies.

No definite number of doctor's visits can be assumed as necessary, but aside from the occurrence of major illnesses, colds and the various diseases of childhood will doubtless make a doctor's services necessary at some time during the year.

At least one visit to the dentist during the year for three members of the family will be necessary, and rarely does one visit prove sufficient.

There is, however, no available quantitative measurement, and the Bureau of Labor Statistics, in preparing budgets, has had to resort to the average expenditure for health of large numbers of families investigated.

In the first standard budget prepared by the Bureau of Labor Statistics provision was made for a life insurance premium sufficient to pay for a \$5,000 policy for the head of the family. This was considered the absolute minimum for protection and safety, since in the event of the husband's death it would furnish an income to the wife and children of not over \$300 a year, or \$6 a week. With the increased cost of living this amount is clearly insufficient. To give the same degree of protection as was accorded in 1914 by a \$5,000 policy, it would now be necessary for the husband to carry \$10,000. Granting that, in order to help carry the burdens of the war, the workingman and his family must make some sacrifices in their standards of living, it would certainly be inadvisable at this time to advocate a policy of less than \$7,500 for the head of the family.

It is highly important that every family should carry insurance on the family dwelling, if owned, and on household furniture. The loss of household equipment is an extremely serious matter to a family of low income. The budget should provide for the premium on a policy large enough to cover the replacement cost of the family's essential personal property in case of loss by fire.

The quantitative standard for carfares will have to be determined locally in each city for which a budget is prepared. If the husband is compelled to ride regularly to and from his work, at least 600 rides will be required.

If the wife is compelled to use a street car for shopping and marketing the necessary allowance must be made for this also.

It is impossible to establish quantity standards for amusements and recreations. The importance of recreation as a factor in healthy living need not, of course, be emphasized. It is accepted as an everyday fact. The only question is as to the character and cost of such recreation. Much wholesome amusement arises naturally within the circle of a family and its friends and costs nothing. On the other hand, the complexity of modern city life places a money price on many simple and desirable forms of amusement. Thus a picnic for a family, or a visit to the park, involves a considerable item of car fare, while a trip on the river will cost a dollar or more. Moreover, occasional visits to the moving pictures are to be expected of at least some members of a family. Thus, even though the more expensive forms of amusement and recreation, such as summer vacations, are eliminated, some expenditures for this item are absolutely necessary if a family is not to lead a completely isolated life.

One daily newspaper should be provided for the workingman's family, and at least one good magazine is indispensable for a proper standard of living.

Organizations, such as the church, and labor unions, play such an important part in the life of the average worker and his family that some expenditure on this account must be regarded as essential to normal living, but no quantitative standard can be established.

In addition to the items listed above there are a large number of other expenses, mostly small or occasional, which can not be entirely avoided by a worker's family—such, for instance, as stationery and postage, telephoning and telegraphing at times, tobacco, etc. No minimum quantities for these items can possibly be specified, and the only solution is to grant a modest sum of money to cover expenditures for incidentals.

The Government's Wage Policy During the Last Quarter Century.^a

By MARY CONYNGTON.

IN A sense the Government can scarcely be said to have had a wage policy for half a century or more. Unquestionably when, at the close of the Civil War, the salary scale was set, it was liberal as compared both with the cost of living and the prevailing wages and salaries outside of the Government service. The idea that a Government position was a "cinch," "an easy thing" became then so widespread and so deeply rooted that it lingers to this day, to the considerable detriment of the service. But having established its organization and set its scale of compensation, the Government appeared to feel that the matter was done with forever, and took no further steps except when in some particular group or division conditions arose which forced action. Thus such changes as occurred were merely alterations in specific salaries or groups of salaries, and the salary scale as a whole was almost untouched.

While prices remained fairly constant this did not matter so much, but for some time before the European War began there had been an upward tendency which brought about a relative reduction in the value of established salaries, and with the outbreak of the war this tendency was sharply accentuated. Wages and salaries which had before been satisfactory became altogether inadequate. The question of adjusting earnings to the cost of living became one of vital importance, and in private business enlightened employers on the one hand, and the more intelligent employees on the other, perceived the necessity of maintaining some relation between rates of wages and prices of commodities. Some employers adopted the policy during this period of revising wages periodically according to the fluctuations of the cost-of-living figures published by the Bureau of Labor Statistics, Dun, or Bradstreet, while others merely made advances which they considered met in a general way the needs of the employees under the changed conditions.

The entrance of the United States into the war not only increased enormously the number of employees in the Federal service, but brought the Government into close relations with labor outside of its own immediate force. Contracts for food, clothing, and munitions had to be let, and disagreements between the employers and employees engaged in producing these supplies might cause delay, with consequences to the successful prosecution of the war which no one could foresee. Consequently, in regard to these outside workers, it was necessary to have a policy and to declare it, and from the first the Government committed itself to the general principle that the

^a The tables in the following discussion, except where otherwise credited, are based on figures furnished to the Commission on Reclassification by the various bureaus, divisions, and groups concerned, and used by the commission as the basis of a series of charts prepared under the direction of Dr. C. D. Jarvis, of the Bureau of Education. One of these charts is given on page 31 and one on page 33.

worker is entitled to a living wage, and that to insure his getting this, wages must rise proportionately with the cost of living.

The War Department announced this policy in regard to outside workers during the first year of our participation in the war. In General Order No. 13, issued by the Chief of Ordnance, November 15, 1917, the following section appears:¹

Wage standards.—Standards already established in the industry and in the locality should not be lowered. The minimum wage rates should be made in proper relation to the cost of living, and in fixing them it should be taken into consideration that the prices of necessities of life have shown great increases.

The National War Labor Board, created especially to deal with labor difficulties, indorsed the principle unreservedly, and based numerous decisions upon it. In a number of instances the board specifically provided for periodic revision of its findings, in order that wages might be adjusted to the fluctuations of the index figure of the cost of living, as worked out by its staff or by the Bureau of Labor Statistics. In one of its early awards it explicitly declares its policy. After decreeing an increase in wages, the award continues:²

The wage scale adopted here is based upon the present cost of living. On January 1 and July 1 of each year during the war and for six months thereafter, there shall be an adjustment of wages which shall automatically take place on the above dates, provided the Government statistics show an increase in the cost of living of not less than 10 per cent of the cost on July 1, 1918, in which case the employee shall receive an increase in wages equal to the said increase in cost of living. Should said statistics show a decrease of not less than 10 per cent in the cost of living, then the rate of wages shall be correspondingly decreased.

Another Government agency, the so-called Macy Board, which was established to handle wage matters in the shipyards of the country, also announced a definite policy of periodic adjustments of wages during the war. Such adjustments were to take place on October 1 and April 1, provided a material change in the cost of living had taken place since the last adjustment date.³

These were all wartime measures, but the Government has formally recognized the principle since the signing of the armistice. At the time of the soft-coal strike last winter the Fuel Administrator, though openly and bitterly opposed to the demands of the men, admitted that they might fairly claim an advance proportioned to the increase in cost of living, and fixed a rate which according to his calculation met this condition. Along the same line the Esch-Cummins bill, adopted in February by both Houses of Congress, definitely instructs the Railroad Labor Board, when fixing rates of pay for railroad workers, to take into consideration the relation between wages and the cost of living.

¹ Labor policy of the War Department, MONTHLY REVIEW, December, 1917, p. 52.

² National War Labor Board, Docket No. 35, *Employees v. Manufacturers of Newsprint Paper*. Award rendered June 27, 1918.

³ For a full statement of this policy see the awards of the Macy Board rendered October 24, 1918, establishing a uniform wage scale for shipbuilding workers. MONTHLY LABOR REVIEW, December, 1918, pp. 197-212.

Salaries of Government Employees, 1893 to 1919.

SO FAR as the general principle is concerned, then, the Government has placed itself on record as in favor of a definite relation between compensation and cost of living, this relation to be maintained by periodic revisions of compensation in order that the employee may not be adversely affected by increases in the cost of living, nor reap the whole benefit of decreases in that cost. In practice, however, so far as its own employees are concerned, the Government has shown no desire to translate this principle into action. In the tables which follow the average salaries paid to Government employees in the District of Columbia are for fiscal years beginning July 1 of the year shown. The indexes of retail prices of food are based on data furnished by the United States Bureau of Labor Statistics, and are for calendar years.

Table 1 relates to average salaries of all Government employees in the District of Columbia.

TABLE 1.—NUMBER AND AVERAGE SALARY OF GOVERNMENT EMPLOYEES IN THE DISTRICT OF COLUMBIA, 1893 TO 1919, AND PURCHASING POWER OF SALARY IN RELATION TO 1893 SALARY.

[The 1917 and 1919 average salary figures do not include the bonus. Those for 1919 include, however, the salaries of workers in the new organizations growing out of the war who came in at a higher level of salaries than prevailed in the older establishments and they also include certain salaries of Navy employees whose salaries were adjusted by the Henry award.¹ For the older Government employees these factors tend to offset the omission of the bonus and make the table a reasonably accurate statement of what has happened to them. The average salaries are based on figures given in the Official Register.

Year.	Number of employees.	Average salary.	Index of retail prices of food.	Purchasing power of salary in relation to 1893 salary.	Average salary necessary to maintain purchasing power of 1893 salary.
1893.....	14,919	\$1,096	100	\$1,096	\$1,096
1895.....	13,615	1,114	94	1,185	1,030
1897.....	16,182	1,073	92	1,166	1,008
1899.....	19,446	1,009	96	1,051	1,052
1901.....	23,160	1,040	101	1,030	1,107
1903.....	23,757	1,067	106	1,007	1,162
1905.....	25,481	1,065	107	995	1,173
1907.....	28,947	1,090	115	948	1,260
1909.....	30,768	1,105	125	884	1,370
1911.....	36,975	1,109	130	853	1,425
1913.....	36,289	1,134	141	804	1,545
1915.....	38,571	1,141	142	804	1,556
1917.....	45,706	² 1,184	206	575	2,258
1919.....	91,791	² 1,321	259	510	2,839
Increase in average salary, 1919 compared with 1893, 20.53 per cent.					

¹ The Henry award differed from the Macy awards in that the latter dealt with the employees of the privately-owned shipyards working for the Government while the former dealt with Government employees. Its terms demanded higher qualifications in the architects and draftsmen affected than was the case with the Macy awards.

² Not including bonus. Exact data on which to compute the average bonus were not available, but the Reclassification Commission Report states (p. 41) that \$216 is a fair amount to allow for average bonus in 1919.

It is very evident from this table that in regard to its own employees the Government has given little attention either to the necessity of paying a living wage, or to the desirability of salary revisions to maintain the due relation between compensation and cost of living. If the average salary of \$1,096 was fair and reasonable in 1893, the average salary of \$1,321 in 1919, representing only half the purchasing value of the salary of 1893, is unfairly and unreasonably low. Nor have the variations which the average shows borne any material relation to the fluctuations in prices. From 1893 to 1911 the average salary varied within a range of only \$105, and at the latter date was only \$13 higher than at the beginning of the period. Meanwhile retail prices, taking the index figure of 1893 as the base, had fallen to 92 in 1897 and then risen to 130 in 1911. Owing to the fall in prices, the Government employee was for some years relatively better off than he was in 1893, but from 1901 onward his condition grew steadily worse, and from 1915 onward the deterioration was exceedingly rapid. It is true that while the average salary was \$1,141 in 1915 it had become \$1,321 in 1919, an increase of \$180, or 15.8 per cent, but during this same time the index figure of retail prices of food had risen from 142 to 259, an increase of 82.4 per cent. As shown on page 63 of this issue of the REVIEW, retail prices of food in April, 1920, were 113 per cent higher than in June, 1915.

There is always some question as to whether a comparison covering so long a period as shown in this table is entirely fair. The force in 1919 was much larger than in 1893, the range of the Government's activities had been much widened, and there is no assurance that the work done by the typical Government clerk in 1919 was the same in character as it was in 1893. It is sometimes asserted that the demand on the rank and file of the employees is not so great now as it was in the nineties; the work has been much more specialized, with the result, it is said, that the ordinary worker is not required to have as much initiative or as varied abilities as in the earlier days. It is possible that there is some truth in this contention, but there are two facts to be set against it when the adequacy of the present salary scale is under consideration. The scientific work of the Government has been greatly extended since 1893, so that it now employs a much larger force of highly trained scientific and technical experts, who should normally be highly paid men, and whose salaries should tend to bring up the general level. For the rank and file, there has also been a marked increase in the intensity of work required. Hours have been lengthened, privileges curtailed, and much more persistent and strenuous effort required than was the case 27 years ago, when relatively the salary scale was materially higher than now.

Of course it is not possible to say whether these latter considerations exactly counterbalance the first, so it is worth while to examine the salary changes of some smaller groups, selected because in their cases it has been possible to make sure that there has been no material change either in the character of the work done or, usually, in the manner of doing it.

Table 2 shows the average salaries since 1897 for a group in which there has been little change, the assistants in the reading room and catalogue divisions of the Library of Congress.

TABLE 2.—NUMBER AND AVERAGE SALARY OF ASSISTANTS IN THE READING ROOM AND CATALOGUE DIVISIONS OF THE LIBRARY OF CONGRESS, 1897¹ TO 1919, AND PURCHASING POWER OF SALARY IN RELATION TO 1897¹ SALARY.

Year.	Number of employees.	Average salary.	Index of retail prices of food. ²	Purchasing power of salary in relation to 1897 salary.	Average salary necessary to maintain purchasing power of 1897 salary.
1897 ¹	28	\$1,200	100	\$1,200	\$1,200
1898	28	1,200	103	1,165	1,236
1899	48	1,023	105	974	1,260
1900	81	899	106	848	1,272
1901	102	890	111	802	1,332
1902	126	957	115	832	1,389
1903	126	957	116	825	1,392
1904	126	957	117	818	1,404
1905	126	957	117	818	1,404
1906	125	950	122	779	1,464
1907	125	950	126	754	1,512
1908	125	950	129	736	1,548
1909	125	950	137	693	1,644
1910	127	929	143	650	1,716
1911	128	922	142	649	1,704
1912	129	931	151	617	1,812
1913	129	931	154	605	1,848
1914	129	964	157	614	1,884
1915	129	964	156	618	1,872
1916	131	981	175	561	2,100
1917	132	981	224	438	2,688
1918	134	982	258	381	3,096
1919	134	982	283	347	3,396

Decrease in average salary, 1919 compared with 1897, 18.17 per cent.

¹ Year organized.

² As 1897 is the earliest year for which data as to salaries of Library of Congress employees are available, it was necessary for comparative purposes to use retail prices of food for that year as the base, or 100, in calculating the index numbers shown in this column. These index numbers, therefore, do not agree with the index numbers of prices shown in other tables of this series which are based on prices in 1893=100.

³ Not including bonus. With bonus average salary was \$1,222 in 1919.

The marked drop in the average salary beginning in 1899 was due to the enlargement of the force and the creation of a number of low-salaried positions. Owing to this change, a comparison of 1897 with 1919 may be unfair, but either 1901 or 1902 might legitimately be taken as a basis of comparison. Since 1901 the number of workers has increased by 32, but since 1902 by only 8. Including the bonus, the average salary shows an increase of 37.3 per cent since 1901, and of 27.7 per cent since 1902, while the index figure of retail prices, the figure of 1893 being taken as a basis (see Table 1), has risen from 101 in 1901, and 106 in 1902, to 259 in 1919. The increase in the average salary of these workers comes very close to that for the whole body of workers, as given in Table 1, which shows that the average salary in 1919 amounted to 27 per cent over the average for 1901, and 23.8 per cent over that for 1903. The average salary of the library assistants in 1919, however, would be lower than the figure here given were it not that at the present time a number of the more poorly paid positions are vacant, it being impossible to secure workers at the salaries they carry.

Tables 3 and 4, dealing with the hydrographic and geodetic engineers, and the naval architects and draftsmen, present an interesting contrast, showing how largely the Government is influenced in its treatment of salaries by outside conditions.

TABLE 3.—NUMBER AND AVERAGE SALARY OF HYDROGRAPHIC AND GEODETIC ENGINEERS OF COAST AND GEODETIC SURVEY, 1893 TO 1919, AND PURCHASING POWER OF SALARY IN RELATION TO 1893 SALARY.

Year.	Number of employees.	Average salary.	Index of retail prices of food.	Purchasing power of salary in relation to 1893 salary.	Average salary necessary to maintain purchasing power of 1893 salary.
1893.....	55	\$2,065	100	\$2,065	\$2,065
1894.....	46	2,028	96	2,113	1,982
1895.....	42	2,033	94	2,163	1,941
1896.....	42	2,033	92	2,210	1,900
1897.....	42	2,033	92	2,210	1,900
1898.....	48	1,889	94	2,010	1,941
1899.....	61	1,788	96	1,863	1,982
1900.....	62	1,798	97	1,854	2,003
1901.....	77	1,588	101	1,572	2,086
1902.....	77	1,588	106	1,498	2,189
1903.....	77	1,588	106	1,498	2,189
1904.....	81	1,579	107	1,476	2,210
1905.....	81	1,579	107	1,476	2,210
1906.....	81	1,622	111	1,461	2,292
1907.....	93	1,619	115	1,408	2,375
1908.....	93	1,619	118	1,372	2,437
1909.....	93	1,619	125	1,295	2,581
1910.....	93	1,653	131	1,263	2,705
1911.....	93	1,658	130	1,275	2,685
1912.....	93	1,658	138	1,201	2,850
1913.....	93	1,658	141	1,176	2,912
1914.....	93	1,658	144	1,151	2,974
1915.....	99	1,703	142	1,199	2,932
1916.....	104	1,720	161	1,068	3,325
1917.....	124	1,754	206	851	4,254
1918.....	124	1,754	237	740	4,894
1919.....	140	1,835	259	708	5,348
Decrease in average salary, 1919 compared with 1893, 12.53 per cent.					

¹ Not including bonus; figures not available.

TABLE 4.—NUMBER AND AVERAGE SALARY OF NAVAL ARCHITECTS AND DRAFTSMEN BUREAU OF CONSTRUCTION AND REPAIR, NAVY DEPARTMENT, 1893 TO 1919, AND PURCHASING POWER OF SALARY IN RELATION TO 1893 SALARY.

Year.	Number of employees.	Average salary.	Index of retail prices of food.	Purchasing power of salary in relation to 1893 salary.	Average salary necessary to maintain purchasing power of 1893 salary.
1893.....	34	\$1,492	100	\$1,492	\$1,492
1894.....			96		1,432
1895.....			94		1,402
1896.....	42	1,506	92	1,637	1,373
1897.....			92		1,373
1898.....			94		1,402
1899.....			96		1,432
1900.....	42	1,641	97	1,691	1,447
1901.....			101		1,507
1902.....			106		1,582
1903.....			106		1,582
1904.....	48	1,637	107	1,530	1,596
1905.....	48	1,609	107	1,504	1,596
1906.....	44	1,597	111	1,439	1,656
1907.....	41	1,720	115	1,496	1,716
1908.....			118		1,761
1909.....	46	1,689	125	1,351	1,865
1910.....	47	1,665	131	1,271	1,955
1911.....	47	1,665	130	1,281	1,940
1912.....	45	1,727	138	1,251	2,059
1913.....	47	1,716	141	1,217	2,104
1914.....	47	1,827	144	1,269	2,148
1915.....	49	1,798	142	1,266	2,119
1916.....	76	1,626	161	1,010	2,402
1917.....	139	1,552	206	753	3,074
1918.....	178	2,032	237	857	3,536
1919.....	143	2,498	259	965	3,864
Increase in average salary, 1919 compared with 1893, 67.43 per cent.					

¹ Not including bonus; figures not available.² Not including bonus. The advance in salary received in 1918 made most of these employees ineligible for the bonus. In 1919 they came under the Henry award, receiving another increase, but being excluded from the bonus.

In 1893, it will be observed, the hydrographic and geodetic engineers had a considerably better standing than the naval group, their average salary being \$2,065 against an average of \$1,492 for the architects and draftsmen. From 1898 to 1901 the engineering group was undergoing a process of adjustment, the number being increased and the average salary lowered, but by 1901 both numbers and salary had reached a relatively stationary position. At this time their average salary, \$1,588, was somewhat below that of the naval group in 1900, the nearest comparable date, and so it remained until war conditions materially changed the status of the latter. The effect of the war, even before the United States entered it, was to cause a great expansion of the Navy's building program, which necessitated bringing into the service a much larger number of architects and draftsmen than had previously been employed. These, coming in at the entrance rates, lowered the average salary from \$1,798 in 1915 to \$1,626 in 1916 and \$1,552 in 1917. But our entrance into the war created a tremendous demand for these architects and draftsmen, and in order to keep its men at all the Government simply had to raise its scale, so that in 1918 the average became \$2,032. The following year the group came under the Henry award, and the average rose to \$2,498, an increase of 53.6 per cent over the average of 1916 and of 67.4 per cent over that of 1893. Even this increase, however, fell noticeably below that of the price index figure. Meanwhile, the hydrographic and geodetic engineers fared but poorly. Outside the Government service there is little demand for their kind of work, so that the coming of the war with its accompaniment of soaring prices brought no increased competition for their services. Consequently, no particular attention was paid to their needs, and their basic salary in 1919 was actually lower than in 1893 and only 15.6 per cent higher than in 1901, the year in which the process of readjustment of numbers and salaries might be looked upon as complete.

Both of these groups—the engineers and the architects—are composed of skilled and trained men. Neither received increases of salary proportionate to the increased cost of living, but the difference in their relative positions in 1919 is a striking commentary on the lack of a governmental policy of salaries. In one case there was strong outside competition for the services of the employees, and the Government accordingly increased salaries; in the other there was no such competition and salaries remained almost unchanged. The relation of the salaries to the cost of living or to the skill and training required of the worker apparently played no part in either case.

Table 5 shows the average salaries of the adjudicating clerks of the General Land Office. The duties of this group have been practically the same for the past 27 years.

TABLE 5.—NUMBER AND AVERAGE SALARY OF ADJUDICATING CLERKS, GENERAL LAND OFFICE, INTERIOR DEPARTMENT, 1893 TO 1919, AND PURCHASING POWER OF SALARY IN RELATION TO 1893 SALARY.

Year.	Number ^a of employees.	Average salary.	Index of retail prices of food.	Purchasing power of salary in rela- tion to 1893 salary.	Average salary necessary to maintain pur- chasing power of 1893 salary.
1893.....	179	\$1,473	100	\$1,473	\$1,473
1894.....	179	1,473	96	1,534	1,414
1895.....	182	1,451	94	1,544	1,385
1896.....	187	1,440	92	1,565	1,355
1897.....	187	1,440	92	1,565	1,355
1898.....	185	1,437	91	1,529	1,385
1899.....	188	1,424	96	1,483	1,414
1900.....	189	1,428	97	1,472	1,429
1901.....	189	1,428	101	1,414	1,488
1902.....	188	1,436	106	1,355	1,561
1903.....	193	1,434	106	1,353	1,561
1904.....	196	1,445	107	1,350	1,576
1905.....	191	1,454	107	1,359	1,576
1906.....	187	1,469	111	1,323	1,635
1907.....	187	1,471	115	1,279	1,694
1908.....	178	1,498	118	1,270	1,738
1909.....	183	1,515	125	1,212	1,841
1910.....	182	1,522	131	1,162	1,930
1911.....	177	1,540	139	1,185	1,915
1912.....	177	1,540	138	1,116	2,033
1913.....	176	1,544	141	1,095	2,077
1914.....	174	1,551	144	1,077	2,121
1915.....	180	1,547	142	1,089	2,092
1916.....	172	1,566	161	973	2,372
1917.....	162	1,585	206	769	3,034
1918.....	173	1,553	237	655	3,491
1919.....	170	1,571	259	606	3,815

Increase in average salary, 1919, compared with 1893, 6.65 per cent.

^a Not including bonus. With bonus average salary was \$1,649 in 1917, \$1,673 in 1918, and \$1,811 in 1919.

The group shows singularly little change, either in numbers or in salary, since 1893, the number of employees having decreased by nine, and the average basic salary having risen by \$98 in the period covered. This increase is due partly to a slightly higher minimum salary, and partly to the fact that the lower-paid positions are only partially filled, it being impossible to get a full complement of workers at the salaries offered. Including the bonus, the average salary of this group shows almost exactly the same increase over that of 1893 as is shown in Table 1 for the Government employees as a whole—22.9 per cent against 20.5 per cent.

Table 6 shows the average salaries of the geologists of the Geological Survey. The fact that the average salary in 1893 was well over \$2,000 is a strong indication of the value set upon their services at that time. The importance of their work has not declined, but the increase in the average salary is small, and is partly due to the separation of the lower-paid men from the service. The demand for geologists outside the Federal service is increasing, but has not yet become sufficiently direct and pronounced to raise Government salaries as it did in the case of the naval architects.

Tables 7 and 8, dealing with the compositors and pressmen of the Government Printing Office, are interesting as showing the influence of outside demand, which in its turn is obliged to meet the conditions decided upon by a strong union.

TABLE 6.—NUMBER AND AVERAGE SALARY OF GEOLOGISTS, UNITED STATES GEOLOGICAL SURVEY, INTERIOR DEPARTMENT, 1893 TO 1919, AND PURCHASING POWER OF SALARY IN RELATION TO 1893 SALARY.

Year.	Number of employees.	Average salary.	Index of retail prices of food.	Purchasing power of salary in relation to 1893 salary.	Average salary necessary to maintain purchasing power of 1893 salary.
1893.....	24	\$2,283	100	\$2,283	\$2,283
1894.....	31	2,036	96	2,121	2,192
1895.....	33	2,079	94	2,166	2,146
1896.....	35	2,069	92	2,249	2,100
1897.....	33	2,178	92	2,367	2,100
1898.....	33	2,287	94	2,433	2,145
1899.....	33	2,387	96	2,486	2,192
1900.....	40	2,164	97	2,231	2,215
1901.....	54	1,967	101	1,948	2,306
1902.....	54	2,067	106	1,911	2,420
1903.....	57	2,122	106	2,002	2,420
1904.....	75	2,002	107	1,871	2,443
1905.....	73	2,050	107	1,916	2,443
1906.....	78	2,235	111	2,014	2,534
1907.....	105	1,929	115	1,677	2,625
1908.....	109	1,861	118	1,577	2,694
1909.....	106	2,066	125	1,653	2,854
1910.....	107	2,096	131	1,600	2,991
1911.....	111	2,123	130	1,633	2,968
1912.....	114	2,167	138	1,570	3,151
1913.....	120	2,191	141	1,554	3,219
1914.....	122	2,255	144	1,566	3,288
1915.....	126	2,233	142	1,573	3,242
1916.....	119	2,410	161	1,497	3,676
1917.....	115	2,470	206	1,199	4,703
1918.....	113	2,601	237	1,097	5,411
1919.....	108	2,733	259	1,055	5,913

Increase in average salary, 1919, compared with 1893, 19.7 per cent.

¹ Not including bonus. With bonus average salary was \$2,482 in 1917, \$2,663 in 1918, and \$2,858 in 1919.

TABLE 7.—NUMBER AND AVERAGE SALARY OF COMPOSITORS, GOVERNMENT PRINTING OFFICE, 1893 TO 1919, AND PURCHASING POWER OF SALARY IN RELATION TO 1893 SALARY.

Year.	Number of employees.	Average salary.	Index of retail prices of food.	Purchasing power of salary in relation to 1893 salary.	Average salary necessary to maintain purchasing power of 1893 salary.
1893.....	916	\$1,002	100	\$1,002	\$1,002
1894.....	920	1,002	96	1,042	962
1895.....	749	1,002	94	1,066	942
1896.....	771	1,002	92	1,089	922
1897.....	778	1,002	92	1,089	922
1898.....	961	1,002	94	1,066	942
1899.....	970	1,252	96	1,204	962
1900.....	990	1,252	97	1,291	972
1901.....	1,147	1,252	101	1,240	1,012
1902.....	1,117	1,252	106	1,181	1,062
1903.....	1,040	1,252	106	1,181	1,062
1904.....	1,023	1,252	107	1,170	1,072
1905.....	816	1,252	107	1,170	1,072
1906.....	600	1,252	111	1,128	1,112
1907.....	498	1,252	115	1,089	1,152
1908.....	427	1,252	118	1,061	1,182
1909.....	425	1,252	125	1,002	1,253
1910.....	418	1,252	181	966	1,313
1911.....	421	1,252	130	963	1,303
1912.....	401	1,252	138	907	1,383
1913.....	395	1,252	141	888	1,413
1914.....	338	1,252	144	869	1,443
1915.....	343	1,252	142	882	1,423
1916.....	335	1,252	161	778	1,613
1917.....	377	1,252	206	608	2,064
1918.....	330	1,502	237	634	2,375
1919.....	446	1,878	259	725	2,595

Increase in average salary, 1919, compared with 1893, 87.42 per cent.

¹ Not including bonus. With bonus average salary was \$2,118 in 1919; average for 1917 and 1918 not computed.

TABLE 8.—NUMBER AND AVERAGE SALARY OF PRESSMEN, GOVERNMENT PRINTING OFFICE, 1893 TO 1919, AND PURCHASING POWER OF SALARY IN RELATION TO 1893 SALARY

Year.	Number of employees.	Average salary.	Index of retail prices of food.	Purchasing power of salary in relation to 1893 salary.	Average salary necessary to maintain purchasing power of 1893 salary.
1893.....	68	\$1,002	100	\$1,002	\$1,002
1894.....	58	1,002	96	1,042	962
1895.....	63	1,252	94	1,332	942
1896.....	72	1,252	92	1,361	922
1897.....	88	1,252	92	1,361	922
1898.....	89	1,252	94	1,332	942
1899.....	86	1,252	96	1,304	962
1900.....	85	1,252	97	1,291	972
1901.....	91	1,252	101	1,240	1,012
1902.....	98	1,252	106	1,181	1,062
1903.....	125	1,252	106	1,181	1,062
1904.....	118	1,252	107	1,170	1,072
1905.....	100	1,252	107	1,170	1,072
1906.....	99	1,252	111	1,128	1,112
1907.....	108	1,252	115	1,089	1,152
1908.....	126	1,252	118	1,061	1,182
1909.....	125	1,252	125	1,002	1,253
1910.....	128	1,252	131	956	1,313
1911.....	120	1,252	130	963	1,303
1912.....	125	1,377	138	998	1,383
1913.....	129	1,377	141	977	1,413
1914.....	127	1,377	144	956	1,443
1915.....	124	1,377	142	970	1,423
1916.....	126	1,377	161	855	1,613
1917.....	202	1,377	206	668	2,064
1918.....	192	1,628	237	687	2,375
1919.....	206	1,878	259	725	2,595
Increase in average salary, 1919, compared with 1893, 87.42 per cent.					

¹ Not including bonus. With bonus average salary was \$2,118 in 1919; average for 1917 and 1918 not computed.

It will be noticed that between 1902 and 1908 the compositors show a marked falling off in numbers, and that from the latter date onward there is relatively little variation in this respect. This change was due to the introduction of typesetting machines, by which much the greater part of the typesetting is now done. Nevertheless, some kinds of typesetting are still done by hand, and in order to make a fair comparison, the salary figures have been limited to those who were kept on at this handwork. In the years when the change to the machines was being made the number of the handworkers naturally declined rapidly, but this was the only change in the group, the work done having remained the same throughout the period covered. The pressmen show the same stability as the compositors in character of work done. The presses of to-day are larger, have more cylinders and run at greater speed, but the kind and degree of skill required of the pressmen are the same.

For these two groups, then, the character of work done has remained absolutely unchanged since 1893, and up to 1917 the same might almost be said of their wages. For the compositors the average salary remained stationary from 1899 to 1917; for the pressmen there was a slight increase in 1912, after which the salary was unchanged until 1918. In the case of both groups, however, the Government has been obliged within the last few years to meet strong outside competition, and as the only apparent means of keeping up the force in the Government Printing Office the union

wage scale was adopted. As a result, these two groups, both receiving the scale of wages that prevails outside, show a greater percentage increase than any of the others considered.

Table 9 brings together the average salaries of groups previously considered and several others not yet mentioned, showing the degree to which the average salary has been increased since 1893, and its level at four different periods.

TABLE 9.—AVERAGE SALARIES OF TYPICAL GROUPS, VARIOUS FISCAL YEARS, 1893-4 TO 1919-20.

Group.	1893-4		1906-7		1916-17		1919-20			
	Number of employees.	Average salary.	Number of employees.	Average salary.	Number of employees.	Average salary.	Number of employees.	Average salary.		
								Without bonus.	With bonus.	
									Amount.	Per cent of increase over 1893.
Clerical services.										
Clerks (General Land Office, Interior Department).....	116	\$1,188	177	\$1,199	261	\$1,124	288	\$1,193	\$1,432	20.54
Adjudicating clerks (General Land Office, Interior Department).....	179	1,473	187	1,469	172	1,566	170	1,571	1,811	22.94
Clerks (all divisions, Post Office Department).....	443	1,279	839	1,223	938	1,284	996	1,349	1,589	24.24
Clerks (Coast and Geodetic Survey, Department of Commerce).....	33	1,049	34	1,098	39	1,125	42	1,131	1,371	21.16
Copyright clerks (Library of Congress).....	129	1,153	64	1,102	83	1,144	83	1,143	1,383	19.95
Assistants (reading room and catalogue division, Library of Congress).....	128	1,200	125	950	131	981	134	982	1,222	1.83
Scientific and technical services.										
Geologists (Geological Survey, Interior Department).....	24	2,283	78	2,235	119	2,410	108	2,733	2,858	25.19
Physicists (Bureau of Standards, Department of Commerce).....			35	1,466	98	1,580	118	1,741	1,741	18.76
Cadastral engineers (General Land Office, Interior Department).....	8	1,513	8	1,725	18	1,642	13	1,788	2,010	32.85
Cartographic engineers (Coast and Geodetic Survey, Department of Commerce).....	16	1,494	19	1,489	22	1,670	27	1,593	1,833	22.69
Architectural draftsmen (Super- vising Architect's Office, Treasury Department).....	50	1,630	51	1,446	54	1,669	38	1,934	2,174	33.37
Engravers (Coast and Geodetic Survey, Department of Commerce).....	10	1,680	19	1,384	20	1,550	20	1,570	1,810	7.74
Naval architects and draftsmen (Bureau of Construction and Repair, Navy Department).....	34	1,492	44	1,597	76	1,626	143	2,498	2,498	67.43
Printing trades.										
Pressmen (Government Printing Office).....	68	1,002	99	1,252	126	1,377	206	1,878	2,118	111.38
Compositors (Government Printing Office).....	916	1,002	600	1,252	335	1,252	446	1,878	2,118	111.38

¹ Figures are for 1897, date of organization.

² Per cent of increase over 1897.

³ Not including bonus; figures not available.

⁴ Not including bonus figures; bonus not allowed.

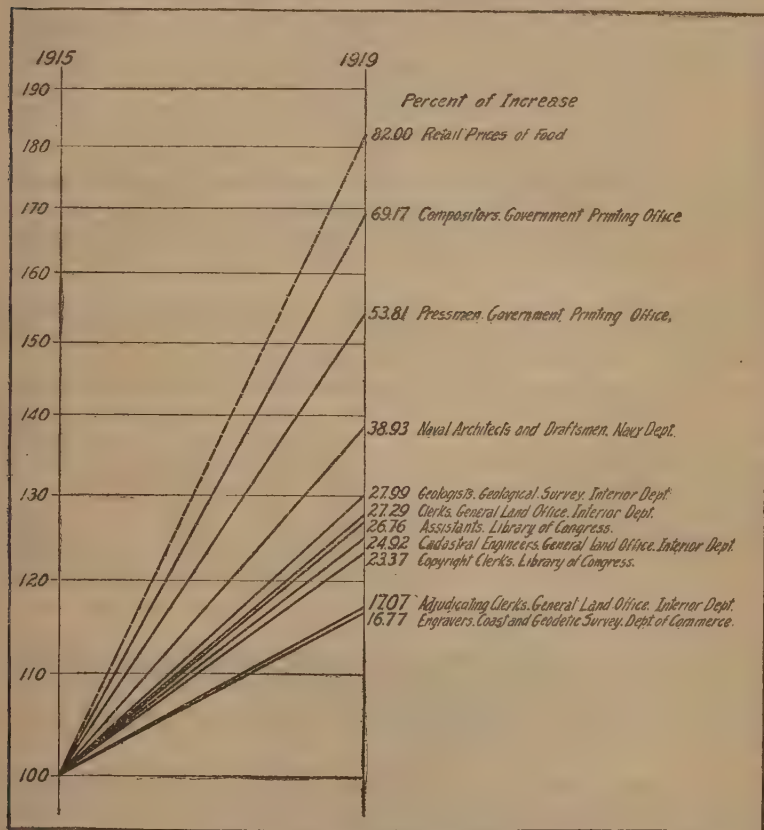
It will be noticed that all of the groups, after they had passed through an organization or reorganization period, tended to become nearly stationary, both as to numbers and salary, until the outbreak of the war brought about changes in most, though not quite all, of them. It is evident that the increases in salary shown have no general underlying principle, and have not been made in accordance with any clearly defined policy. The salary advances received differ considerably from group to group, and are very much higher for the groups representing skilled labor than for those in the clerical and the scientific and technical services. Excluding the copyright clerks and assistants of the Library of Congress, since for them the period of comparison should really begin with the present century, the increases shown for the clerical groups range from 20.54 per cent to 24.24 per cent. In the scientific and technical services, excluding the one group over which the Government came into direct competition with outside employers the range is from 7.74 per cent to 33.37 per cent: including that group, to 67.43 per cent. The two groups from the Government Printing Office, who received the full benefit of outside competition, show an increase of 111.38 per cent. Meanwhile, retail prices show an increase during the period of 159 per cent.

It will be seen that the salaries of these groups, selected for study because it was definitely known that the character of their work had not changed materially in the period covered, do not support the theory that the fall in the real value of the average salary of the Government employees as a body corresponds to a lower standard of requirements which justifies the decrease. But to test the matter still further, another comparison was made. It will hardly be said that the Government's demands, in those bureaus and divisions existing before the war, have altered materially within the past five years, and that its employees deserve relatively a much lower salary to-day than they received in 1915. Yet the purchasing power of their salaries has fallen materially since 1915, as shown in the following chart, which shows for a number of groups of Government employees the salary increases since 1915 as compared with the increase in retail prices of food.

Here, again, there is clear evidence of the lack of any policy underlying the changes. Evidently the increases have not been planned to compensate for the increasing price of food, for in only two cases is the percentage increase in salary even half as great as that in food prices. And they can not have been proportioned to the value of the services rendered, or the compositors and the pressmen would not show such a large percentage increase, and these two would not lead the rest so distinctly. The only conclusion that can be drawn from these varied rates of increase is that the Government raises salaries only when it is forced to do so in order to keep its employees, and then only so far as will enable it to withstand outside competition. When there is no such competition, as, for instance, when the Government is the only employer for some line of scientific or technical work and there is therefore little chance for the worker outside, salaries tend to remain stationary, or are advanced slowly and uncertainly to an extent which is wholly insufficient to meet the increase in the cost of living. This policy of

drift is the more easily followed because Government employees have never shown any inclination to strike, have only recently organized themselves into a union, and have made it one of the basic principles of that union that they shall neither themselves strike nor be called upon to support any strike against the Government.

CHART A.—INCREASE, 1915-1919, IN AVERAGE SALARY OF SPECIFIED GROUPS OF GOVERNMENT EMPLOYEES COMPARED WITH INCREASE IN RETAIL PRICES OF FOOD. AVERAGES INCLUDE BONUS.



Government Salaries Compared with Wages in Industry.

HOW THE Government employee fares as compared with workers outside the service is revealed to some extent in Table 10 and Chart B, which show the relative increases secured since 1915 by the Government force as a whole, and by certain classes of skilled and unskilled workers outside. In this table and chart the index numbers and the line representing retail prices of food are based on figures furnished by the United States Bureau of

Labor Statistics. The index numbers and the line representing average earnings in New York State factories are based on the average weekly earnings as given in the Labor Market Bulletin published by the Bureau of Statistics of the New York State Industrial Commission for January, 1919, page 8. The index numbers for carpenters, hod carriers, machinists, painters, and structural iron workers (lines 3, 4, 5, 6, and 7) are based on the union rates for these occupations given in the MONTHLY LABOR REVIEW for November, 1919, pages 172 to 190, the rates for each trade being averaged for the cities of Baltimore, Boston, Newark (N. J.), New York, Philadelphia, and Washington. The index numbers for railroad employees (line 2) are based on figures given out by the Director General of the Railroad Administration and published in the MONTHLY LABOR REVIEW for December, 1919, page 230; they cover all railroad employees paid at an hourly rate. The index numbers and the line representing the salary rates of the Government employees are based on figures given in the Official Register and do not include bonuses. According to the report of the Reclassification Commission the average bonus paid to Government employees in 1919 was about \$215.

TABLE 10.—RELATIVE ANNUAL SALARIES OF U. S. GOVERNMENT EMPLOYEES, HOURLY RATES OF RAILROAD EMPLOYEES AND OF SKILLED AND UNSKILLED WORKERS (UNION SCALE), WEEKLY EARNINGS OF NEW YORK STATE FACTORY EMPLOYEES, AND RETAIL PRICES OF FOOD, 1915 TO 1919.

Group of employees.	1915	1916	1917	1918	1919
Government employees.....	100.0	(¹)	² 103.8	(¹)	² 115.8
Carpenters.....	100.0	102.6	114.0	124.1	155.2
Structural iron workers.....	100.0	104.4	112.8	131.7	155.6
Painters.....	100.0	107.5	114.7	140.3	178.8
Hod carriers.....	100.0	96.3	118.9	146.7	182.9
New York State factory employees.....	100.0	108.8	122.8	135.1	185.1
Railroad employees.....	100.0	101.9	117.8	170.0	197.0
Machinists.....	100.0	113.7	135.2	166.0	197.7
Retail prices of food ⁴	100.0	113.0	145.0	166.0	182.0

¹ Not reported.

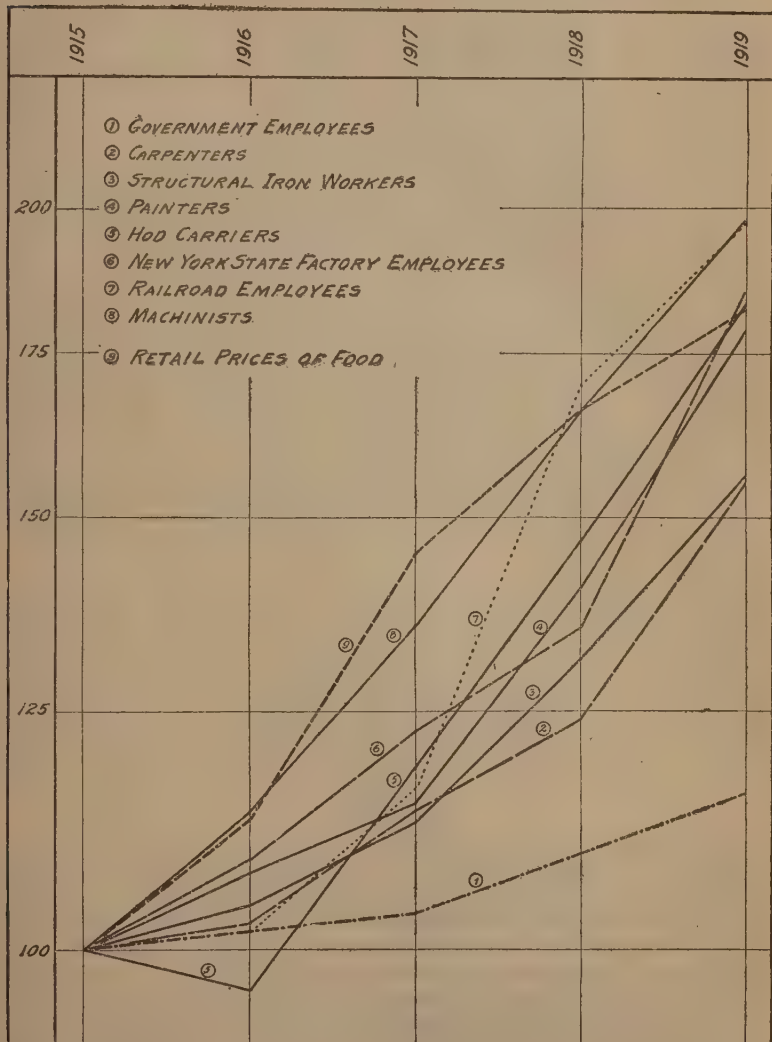
² Not including bonus.

³ Not including bonus but including salaries of workers in the new organizations growing out of the war, who came in at a higher level of salaries than prevailed in the older establishments, and also salaries of certain Navy employees adjusted by the Henry award. The Reclassification Commission estimates that the average bonus of Government employees in 1919 was about \$215.

⁴ It should be noted that prices for 1915 are taken as the base or 100; therefore, the relative retail prices or index numbers of food do not agree with those shown in preceding tables which, with the exception of those in Table 2, are based on prices for 1893=100.

The comparison in Table 10 and Chart B is not a wholly satisfactory one, since most of the relative figures in the table and the corresponding lines in the chart represent rates of pay, not earnings, whereas the line for the Government employees, whose salary is on a yearly basis, represents earnings as well as rates. Against this may be set the fact that during the last two years of the period covered, during which the increase in rates is particularly marked, there was a scarcity of workers, so that unemployment was rare, and overtime, generally at increased rates, was common. Owing to these conditions, the discrepancy between rates and earnings was diminished if not wholly overcome. Also, line No. 6, showing earnings, is strictly comparable with the line showing increases received by the Government employees. It must be remembered that the relative figures

CHART B.—INCREASE, 1915-1919, IN AVERAGE SALARY OF GOVERNMENT EMPLOYEES, COMPARED WITH INCREASE IN RETAIL PRICES OF FOOD, EARNINGS IN NEW YORK STATE FACTORIES, AND WAGE RATES OF CERTAIN SKILLED AND UNSKILLED WORKMEN.



while showing percentage increases, show nothing as to the absolute condition of the recipients. For instance, the percentage of increase between 1915 and 1919 is almost identical for the railroad employees and the machinists, but the actual average hourly rates for the two groups during this period were as follows:

Group of employees.	1915	1916	1917	1918	1919
Railroad employees.....	\$0.270	\$0.275	\$0.318	\$0.459	\$0.532
Machinists.....	.359	.408	.486	.596	.710

The difference in the advances received by the Government workers and the other classes considered is too great to need emphasizing. The average Government salary of 1919 showed an increase over that of 1915 of nearly 16 per cent; rates for carpenters and structural-iron workers, an increase of 55 per cent; for painters, 79 per cent; for hod carriers, 83 per cent; earnings in New York State factories, 85 per cent; rates for railroad employees, 97 per cent; and for machinists, 98 per cent. Lines No. 6 and No. 7 show specially interesting contrasts with the line of the Government workers. Line No. 6 shows that the earnings of the New York factory employees were increased by a percentage more than five times as great as that gained by the Government workers. Line No. 7, representing the rate increase of the railroad employees presents an even more interesting contrast, because the greater part of the increase shown was received while the roads were under Federal control. The rise in the cost of living could not affect the railroad worker more than it did the other Government employees. But the railroad men were strongly organized, they were not habituated to the static condition of Government employees, they were quite accustomed to enforcing their demands by a strike or the threat of a strike, and the conditions prevailing from 1917 to the end of the war would have made a strike peculiarly disastrous. These may not have been the sole reasons for the difference in treatment, but certain it is that the rates paid by the Government in 1919 averaged more than 90 per cent higher than the rates for 1916, the last year in which the roads were under private control, and that during the same period the average salary of the Government employees showed an increase of not quite 16 per cent.

Conclusion.

SURVEYING the whole situation, it does not seem too much to say that the Government's only policy in regard to wages has been to have no policy. As shown by its pronouncements during the war in regard to labor troubles, it recognizes in theory the advantage of establishing liberal scales of compensation for work of standard quality, and the necessity for frequent revisions of the wage or salary scale in order that a due relation may be maintained between cost of living and earnings. But in practice it has shown a complete obliviousness of both considerations. During the whole period covered by the accompanying charts, there has been no general revision of the salary scale, and such advances as have been made have varied

according to the degree of pressure which the employees or outside circumstances have brought to bear upon the Government. The advances have never been proportioned to the increased cost of living except in the one case of the railroad employees, where the Government was dealing with a strongly organized body, able to enforce its claims by drastic action and quite prepared to do so.

There is not the slightest reason to suppose that this lack of policy on the Government's part is due to an attitude either of hostility or of indifference to the employees. It seems rather to be an illustration of the truth of the old adage that what is everybody's business is nobody's business. There is no one responsible body charged with the duty of seeing that the Government pays fair salaries and adjusts them from time to time in accordance with changes in the cost of living and in the value of the work done. The final responsibility for salaries rests with Congress, but Congress has no definite machinery for keeping itself informed upon the question. Generally speaking, whenever a special body has been created to deal with questions of compensation outside of the Government service, it has shown a tendency to handle the matter in a liberal and progressive spirit. Is there any reason to suppose that it would be otherwise were it dealing with the same questions within the service? If a commission or other responsible body were created, charged with the special duty of supervising the compensation and employment conditions of the United States' employees and recommending to Congress from time to time such changes as it considered were required by changing circumstance, it is not too much to suppose that the present policy of drift would disappear, and that the Government would take its place as an enlightened and progressive employer.

Mobility of Labor in American Industry.¹

By PAUL F. BRISSENDEN and EMIL FRANKEL.

THE difficulty of maintaining a stable work force in industrial establishments has directed attention to the problem of labor instability—a phenomenon observable in a particularly intensified form in times of prosperity, but found to be only slightly less serious even in periods of depression. Labor instability is regarded by all those who have given any serious consideration to the problem as one of the maladjustments of our industrial life, wasteful and destructive of the potential man power of the Nation and a serious obstacle to the complete utilization of the country's productive forces. In tackling this problem it should be recognized at the outset that within certain limits establishment labor mobility is a normal and necessary thing. A certain amount of shifting from shop to shop and city to city is quite normal and even desirable; part of this necessary movement of labor is an entirely natural ebb and flow resulting from the normal expansion and contraction of industrial activity. Interest in the question of labor mobility is centered, therefore, not only upon its general extent but more specifically upon whatever part of it may be considered abnormal and unnecessary. When it is considered from this standpoint it is essential to know (1) the nature and extent of labor instability, (2) the various factors which are likely to increase or diminish its volume, and (3) whether any employment methods have been or can be devised which will make it possible to reduce labor instability to such an extent that maximum production may be attained at minimum cost and to the mutual advantage of employer and employee.

In order, however, to give really adequate consideration to the various problems involved in labor instability as it affects different industries in the United States, and more particularly to devise methods for its reduction, it will be necessary to have more detailed and extensive data than have hitherto been available. Fortunately during the last decade a number of progressive firms have given rather close study to the whole problem of labor instability, have made extensive experiments in labor management with a view to stabilizing the work force, and have achieved a measure of success. It is upon data from such establishments that the analytical and descriptive matter of the forthcoming report is very largely based.

Labor instability is generally the consequence of (1) seasonal, cyclical and other fluctuations in industrial activity which result in varying amounts of employment available to the job seeker; (2) individual or collective dissatisfaction with the conditions of employment; and (3) the dissatisfaction of employers with the services of some employees. In its relation to employer and employee this problem of labor instability becomes a more or less personal one and presents itself essentially in two aspects, depending upon whether it is the employee or employer who is concerned: (1) To the individual workman job changing may mean either gain or loss. In prosperous times, when there are more numerous and attractive job

¹ This article is a summary review of a bulletin on this subject soon to be published by the Bureau of Labor Statistics.

opportunities, the change of jobs may represent an actual gain to the worker. Even if there is nothing gained by it it could hardly involve a loss, because in a rising market jobs are likely to be actually awaiting the separating employee and even at the worst the period of unemployment between jobs is likely to be relatively short. In periods of depression the establishment labor mobility problem is for the individual employee a problem of unemployment or irregular employment, the employee becoming the unwilling sufferer from the instability and less commonly the willing cause of it. (2) The individual employer, however, is chiefly interested in the maintenance of a stable working force and regards excessively numerous terminations of employment and, especially, voluntary and more or less avoidable separations as a serious obstacle to efficient and continuous operation. He is also very much concerned with the enormous expense to which he is put because of the excessive labor replacement required for the maintenance of his normal work force.

In the forthcoming report, as well as in this article, the problem of labor instability is taken up, primarily, from the standpoint of the individual establishment. This is done not because labor mobility from the standpoint of the individual workman is less deserving of consideration, but solely because, as has been explained, the data necessary to the study of this subject were readily available only from the records of those establishments which have made serious attempts to cope with the problem of instability.

The objects of the investigation were: (1) To show the general extent of labor mobility in industrial establishments in the United States from 1910 to 1920; (2) to indicate the relative extent of labor mobility in the various industries and localities and in different subdivisions of the work force; (3) to show the relative stability of the work force in those establishments which have been noticeably successful in dealing with the problem of labor instability as compared with the labor instability prevailing in the general run of establishments reporting; and (4), by describing the employment methods used by those establishments which have been most successful in reducing the number of their labor changes, to demonstrate the practical effectiveness of certain labor policies and well-conceived systems of labor management, including general personnel and welfare activities.

Definition and Measurement of Labor Mobility.

ANY adequate comparison of establishment experience in dealing with labor instability, as well as any clear presentation of the relative extent of that instability in different plants, makes a uniform use of terms and a uniform standard of measurement absolutely necessary. The complex problem of labor instability can not be adequately or clearly presented by use of a phrase of such necessarily narrow and specialized connotation as "labor turnover," which has hitherto been loosely used in reference to establishment labor instability generally. It has been decided to use the term "labor turnover" in one sense and one only, and that strictly in reference to the extent of shift and replacement necessary for maintenance of force. This aspect of the matter is the one with which employers

of labor are most intimately concerned. For use in reference to the larger aspect of the flow of industrial workers into and out of industrial establishments, of which labor turnover or replacement is only one phase, a more inclusive term needs to be used. The whole phenomenon of the movement of labor into and out of industrial establishments is referred to here as "labor mobility."² "Labor turnover," as just explained, is used strictly and solely in reference to replacements. Those hired are referred to as "accessions." Those leaving service, under whatever circumstances, are referred to as "separations." Whichever one of these two items—accessions or separations—is the smaller may conveniently be taken as measuring the number of replacements. The total number of labor changes—that is to say, the sum of the accessions and separations—is the "labor flux." The amount by which the accessions in an expanding business are in excess of the separations is the amount of "labor increase." The amount by which the separations in a plant which is curtailing operations exceed the accessions is the amount of "labor decrease."³

The exact method of measuring labor mobility as adopted by the Bureau in the forthcoming report may be briefly outlined as follows: The general extent of labor mobility is statistically determined by comparing the labor flux—that is, the total movement of labor in and out (accessions and separations)—during any given period with the number of labor hours put in by the work force during that period. This flux rate is believed to be the best single index figure to use in showing the general stability situation in any plant or group of plants and in subdivisions within individual establishments. The flux rate is made up of the accession rate and the separation rate. The two latter rates should be shown separately in order to reveal the whole stability situation. The rate of replacement, or "turnover," which means the rate at which separating employees whose places must be filled are replaced by others, may be, for all practical purposes, defined as, and identified with, the rate of separation when that rate is lower than the accession rate and as the rate of accession when that rate is lower than the separation rate. Furthermore, the separation rate should be subdivided so as to show the relative responsibility of discharges, lay-offs, and quits for the total labor outflow. The more important mobility rates may be classified as follows:

Labor mobility rates	{ flux rate	{ accession rate.
		{ separation rate { quitting rate.
	{ replacement (or "turnover") rate.	

In the forthcoming bulletin these different mobility rates are shown, with one or two exceptions, as rates per 10,000 labor hours.⁴ For illustration: The figures in Table 2 (p. 41) show that during the

² The term "labor mobility" primarily connotes movement. From the employer's standpoint, however, it will sometimes be convenient to refer to this condition as "instability," or even to use the word "stability," where that word seems to be appropriate.

³ The relations between accessions, separations, replacements, and flux may be seen from the tabular presentation of them all in Table 2.

⁴ The 10,000-labor-hours base is the one which has recently been adopted by the Bureau of Labor Statistics for the computation of industrial accident frequency and severity rates. (For details see the MONTHLY LABOR REVIEW, January, 1920, pp. 218, 219.)

year ending May 31, 1918, the sum total of accessions and separations for the 176 establishments reporting was 1,244,640. The number of labor hours worked in these plants during this period was 917,703,000. Consequently—

the flux rate is	$\frac{1244640 \times 10,000}{917703000} = 13.6$
the accession rate is	$\frac{631173 \times 10,000}{917703000} = 6.9$
and the separation rate ⁵ is	$\frac{613467 \times 10,000}{917703000} = 6.7$

The rates for any departmental, occupational, or other subdivision of the work force should be figured in a similar way. Thus, for example, to get the accession rate for a particular department or occupation divide the number hired during the period covered by the number of labor hours worked in the same group during that period and multiply by 10,000.

The relation between the three principal methods which have been used hitherto in labor-turnover computation is shown in the following table:

TABLE 1.—COMPARISON OF THREE METHODS OF MEASURING LABOR MOBILITY.

Year.	Accession.	Separation.	Labor flux.
Rate per 10,000 labor hours.			
1913-14.....	3.1	3.3	6.4
1917-18.....	6.9	6.7	13.6
Rate per full-year (3,000-hour) worker.			
1913-14.....	0.9	1.0	1.9
1917-18.....	2.1	2.0	4.1
"Percentage of turnover" (Rochester method).			
1913-14.....		100	
1917-18.....		200	

A separation rate of 1.0 per full-year (3,000-hour) worker, as the Bureau of Labor Statistics has lately computed mobility rates, or a separation rate (called according to the Rochester method "percentage of turnover") of 100 per hundred on the work force, as the Bureau formerly figured "turnover," are both equivalent to a separation rate of 3.3 per unit of 10,000 labor hours as used in this report. Conversely, a separation rate of 6.7 per 10,000 labor hours as used in this report is equivalent to a separation rate of 2.0 per full-year worker and to a "percentage of turnover" (Rochester method) of 200. The flux rate for 1913-14 on the new basis explained above is 6.4, which is the same as a flux rate of 1.9 per full-year

⁵ It is evident, in this particular example, that the separation rate, being lower than the accession rate, must also be the replacement rate.

worker. Such a rate indicates that during the period under observation the sum total of the number hired and leaving is about equal to twice the number of full-year workers employed.

Scope and Limitations of the Basic Data.

THE forthcoming report is based primarily upon information secured by agents of the United States Bureau of Labor Statistics in the course of two extensive field investigations of the subject; a prewar inquiry made in 1915 and 1916 and reporting in a general way the extent of turnover during the 5-year period 1910-1915 and in more detail for the years 1913 and 1914, both the extent of it and the efforts made to reduce it; and a war-time investigation made in 1918, resulting in an intensive report of the mobility situation for the 12-month period ending May 31, 1918. By the use of material secured by correspondence some of the data from these field investigations have been brought down to the end of 1919. Returns from the two inquiries cover upwards of 260 establishments, employing over 500,000 workers, in 17 of the most important industrial States.

It is not claimed that the figures given in the forthcoming report are necessarily and in all cases representative of American industry as a whole. It is realized that because of the relatively small number of establishments used in this study the various mobility rates shown must be regarded as being merely indicative of the general mobility situation at any given time. But whatever may be the limitations of the figures for the measurement of the amount of labor mobility at any particular time, they may be used with entire confidence in gauging the trend in mobility from season to season and from year to year.

Enormous as is the extent of establishment labor instability indicated by the figures presented, it is fair to assume (and this assumption is supported by a good deal of fragmentary evidence) that the actual situation is even worse. The establishments from which the Bureau of Labor Statistics has secured labor mobility figures have necessarily been the concerns which had the figures to give, that is to say, concerns which had given rather more attention than most firms to their force-maintenance problems. The firms reporting are chiefly concerns which had more or less centralized employment systems and were relatively more successful in the maintenance of a stable work force. In such establishments the instability situation is not likely to be as serious as in the general run of American industrial concerns, which as a rule pay little or no attention to the flow of labor in and out and give little thought to its control.

General Extent of Labor Mobility.⁶

THE enormous proportions that labor mobility may take on will be appreciated from an examination of Table 2 where the combined figures for the years 1910 to 1919 show that, in the estab-

⁶ Because of the limited space available only the more important and more general aspects of the subject are considered in this article. Certain phases of the labor mobility problem not touched upon in this article will be dealt with in the forthcoming bulletin; also, some further consideration will be given to points discussed here only in a very general way. Detailed figures will be presented to show the relative extent of labor mobility in different cities in the United States, the proportions of "necessary" and "unnecessary" mobility and the extent of absenteeism and its relation to labor mobility. There are also included detailed descriptive accounts of the employment methods and personnel activities of a number of the establishments which have been especially successful in dealing with the labor mobility problem.

lishments reporting, the accomplishment of 6,353,046,000 hours of work, which is labor time equivalent to that of 2,117,682 full-year (3,000-hour) workers, entailed 2,564,037 accessions and 2,481,280 separations, or a total of 5,045,317 labor changes. In other words, on the average for each year of the decade, 256,404 accessions, 248,128 separations, or a total of 504,532 labor changes were involved in the maintenance and the necessary enlargement or curtailment of a labor force of 211,768 workers. This means that the maintenance and the necessary expansion or curtailment of the requisite work force involved labor changes considerably more than equivalent to a complete annual overturn of the work force. This is as if during one year all the employees had left their jobs and a complete new set of workpeople had taken their places. It appears, then, that each year on the average the number of persons who quit, who were laid off or were discharged, as well as the number who had to be hired, was much larger than the total number of workers on the force at any one time.

TABLE 2.—LABOR MOBILITY 1910 TO 1919.

[Replacement (or "turnover") numbers and rates are printed in boldfaced type.]

Year.	Number of establishments.	Number of workers. ¹	Total labor hours.	Labor changes.		
				*Accessions.	Separations.	Total (flux).
Number.						
1910.....	16	85,263	255,789,000	90,408	86,179	176,587
1911.....	24	109,653	328,959,000	94,029	96,915	190,944
1912.....	54	188,363	565,089,000	210,085	182,287	392,372
1913.....	113	399,449	1,198,347,000	541,746	535,118	1,076,864
1913-14 ²	84	244,814	734,442,000	227,008	243,707	470,715
1914.....	162	373,287	1,119,861,000	300,121	326,755	626,875
1915.....	51	159,054	477,162,000	122,211	99,734	221,945
1916.....	20	94,803	284,409,000	131,300	101,102	232,402
1917.....	27	58,052	174,156,000	79,287	74,917	154,204
1917-18 ²	176	305,901	917,703,000	631,173	613,467	1,244,640
1918.....	29	56,411	169,233,000	97,918	84,999	182,917
1919.....	19	42,632	127,896,000	38,751	36,100	74,851
Total.....		2,117,682	6,353,046,000	2,564,037	2,481,280	5,045,317
Rate per 10,000 labor hours. ³						
1910.....				3.5	3.4	6.9
1911.....				2.9	2.9	5.8
1912.....				3.7	3.2	6.9
1913.....				4.5	4.5	9.0
1913-14 ²				3.1	3.3	6.4
1914.....				2.7	2.9	5.6
1915.....				2.6	2.1	4.7
1916.....				4.6	3.6	8.2
1917.....				4.6	4.3	8.9
1917-18 ²				6.9	6.7	13.6
1918.....				5.8	5.0	10.8
1919.....				3.0	2.8	5.8
Total.....				4.0	3.9	7.9

¹ The figures in column headed "Number of workers" in this and following tables in this article are obtained by dividing the total labor hours by 3,000. These figures are given simply to indicate the approximate size of the work force in order to make it possible directly to compare the absolute number of labor changes with the number of employees in the work force.

² The figures given for "1913-14" and "1917-18" are from establishments reporting in great detail during the two field investigations of this subject made by the Bureau of Labor Statistics in 1914 and 1918. The time covered by the statistical data from these establishments is a 12-month period ending, usually, about the middle of 1914 and 1918, respectively. This applies to the material shown for these dates throughout this article.

³ Computed, as already explained, by dividing the labor-change numbers by the total number of labor hours and multiplying by 10,000.

An examination of the rate figures of Table 2 (bearing in mind the fact that a flux rate of 6.6 represents a complete overturn of force) will show that in 6 of the 10 calendar years represented the number of labor changes in the plants reporting has been more than equivalent to a complete overturn of the work force; that is, there were at least as many accessions and at least as many separations as there were workers on the force. Even in 1915, the most stable year of the decade, there were 122,211 accessions and 99,734 separations entailed in the maintenance and enlargement of a work force of 159,054 employees. This is equivalent to a complete overturn of nearly 75 per cent of the work force during the year. In 1917-18, the most unstable of the periods shown, 631,173 accessions and 613,467 separations, or a total of 1,244,640 labor changes, were involved in the maintenance and enlargement of a work force of 305,901 workers. This is equivalent to more than two complete overturns of the work force during the year.

On the basis of the unit full-year (3,000-hour) worker the situation in the decade reported may be described as follows: Throughout the 10-year period, for every equivalent 3,000-hour worker in the aggregate work force, there were on the average more than two labor changes per year. In 1915, the period of least instability, there were about one and a half labor changes for each full-year worker. In the war period, 1917-18, there were more than four labor changes for each full-year worker in the aggregate work force. This is as if during these 12 months all the employees had left their jobs, an entirely new set had come in to fill their places, and afterwards all the employees in this second set had left their jobs and had in turn been fully replaced by a third set of workers.

There is also to be observed in Table 2 a very definite tendency of the mobility rates to vary with the prevailing industrial situation. This is indicated by relatively high mobility rates for the years 1913 and 1917-18, years of great industrial activity, and by a recession in the rates in years in which the industrial situation has been less favorable. It is quite probable that the labor mobility for the year 1919 is actually higher than is indicated by the figures shown here, since the number of establishments upon which the rates are based is rather small and includes several establishments with unusually low labor-mobility records.

The replacement or "turnover" numbers and rates in Table 2 are indicated by boldfaced type. Thus in 1910 persons were being hired at a rate of 3.5 and employees were leaving at a rate of 3.4 per 10,000 labor hours. The aggregate standard work force was obviously undergoing expansion and all separating employees were more or less promptly replaced. The separation rate, therefore, is to be taken as the replacement or "turnover" rate. In 1914 the situation was very different. Most industrial plants were curtailing operations. The result was an accession rate of 2.7 and a separation rate of 2.9. In these circumstances it is obvious that not all the separating employees were replaced—even tardily—and that consequently the accession rate is to be taken as the replacement rate. In 1914, obviously, not all of the 326,755 separating employees contributed to the turnover, as that word is here defined. There were only 300,121 persons hired during that year. This number, therefore, measures

the turnover, because this is the number of abandoned jobs in which there were replacements. The excess of separations over accessions, amounting in 1914 to 26,634, involves a phase of labor mobility not included in turnover. This excess shows the extent to which the standard work force was diminished during 1914 and in relation to the labor hours is, as already explained, the labor decrease rate, the corresponding excess of accessions in such a year as 1918 being the labor increase rate. In general throughout the 10-year period the accessions and separations have naturally tended to balance each other pretty closely, although they show slight variations reflecting the changing industrial conditions from year to year. Over the whole decade it is to be noted that the accessions appreciably exceed the separations, indicating a net increase in the gainfully employed population and just about such a normal industrial expansion as would naturally be expected.

In Table 3 the mobility figures for the two periods, 1913-14 and 1917-18, are classified by industry groups and the same data are presented in graphic form in Chart A.

TABLE 3.—LABOR MOBILITY IN SPECIFIED INDUSTRY GROUPS, 1913-14 AND 1917-18.

[Replacement (or "turnover") numbers and rates are printed in boldfaced type.]

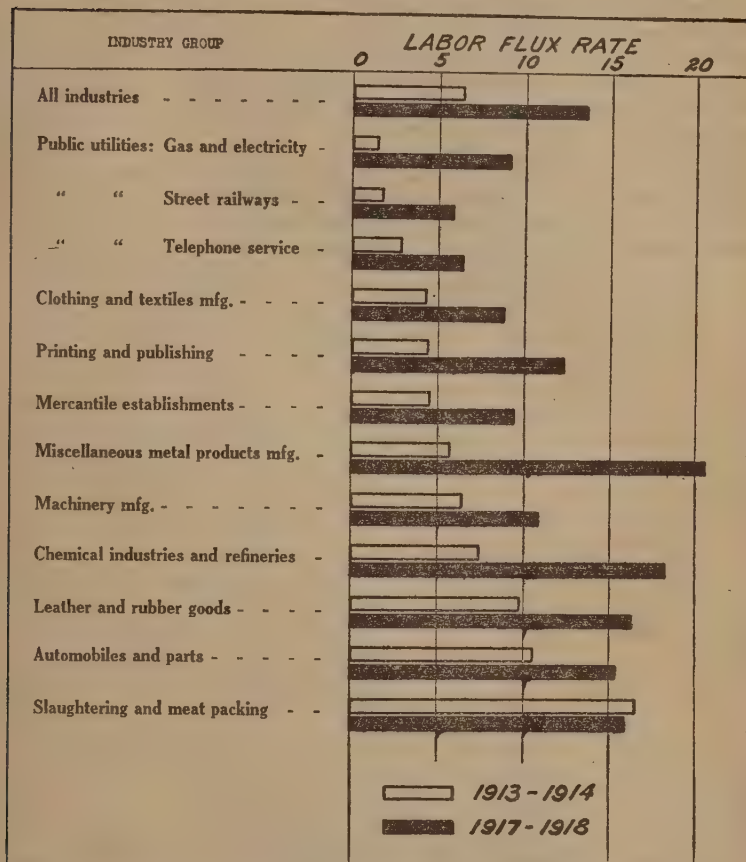
Industry group.	Num-ber of estab-lish-ments.	Num-ber of workers.	Total labor hours.	Number of labor changes.		
				Accessions.	Separations.	Total (flux).
1913-14.						
Automobiles and parts.....	15	32,380	97,140,000	50,564	52,172	102,736
Chemical industries and refineries.....	3	2,900	8,700,000	3,447	3,024	6,471
Clothing and textile manufacturing.....	6	24,842	74,526,000	15,715	16,192	32,207
Leather and rubber goods.....	6	14,210	42,630,000	22,497	19,123	41,620
Machinery manufacturing.....	16	36,890	110,670,000	29,465	40,126	69,591
Mercantile establishments (wholesale and retail).....	5	16,543	49,629,000	11,903	10,964	22,867
Miscellaneous metal products manufacturing.....	20	63,797	191,391,000	52,313	59,551	111,864
Printing and publishing.....	5	5,566	16,698,000	3,851	3,679	7,530
Public utilities:						
Gas and electricity manufacturing.....	1	650	1,950,000	91	202	293
Street railways.....	3	15,540	46,620,000	4,094	4,346	8,440
Telephone service.....	2	21,801	65,403,000	8,465	10,786	19,251
Slaughtering and meat packing.....	2	9,695	29,085,000	24,603	23,242	47,845
Total.....	84	244,814	734,442,000	227,008	243,707	470,715
1917-18.						
Automobiles and parts.....	30	96,856	290,568,000	222,954	220,475	443,429
Chemical industries and refineries.....	15	15,754	47,262,000	46,880	39,622	86,502
Clothing and textile manufacturing.....	8	10,794	32,382,000	13,687	15,227	28,914
Furniture and millwork.....	3	2,300	6,900,000	5,727	7,036	12,763
Leather and rubber goods.....	4	5,020	15,060,000	12,119	12,393	24,512
Machinery manufacturing.....	31	37,532	112,596,000	62,085	59,782	121,867
Mercantile establishments (wholesale and retail).....	7	24,124	72,372,000	33,165	34,879	68,044
Miscellaneous metal products manufacturing.....	45	32,682	98,016,000	104,127	99,006	203,133
Printing and publishing.....	5	1,940	5,820,000	3,433	3,655	7,088
Public utilities:						
Gas and electricity manufacturing.....	10	18,908	56,724,000	25,905	26,661	52,566
Street railways.....	4	9,928	29,784,000	8,062	9,623	17,685
Telephone service.....	10	21,338	64,014,000	19,740	21,864	41,604
Slaughtering and meat packing.....	4	28,725	86,175,000	73,239	63,244	136,533
Total.....	176	305,901	917,703,000	631,173	613,467	1,244,640

TABLE 3.—LABOR MOBILITY IN SPECIFIED INDUSTRY GROUPS, 1913-14 AND 1917-18—
Concluded.

Industry group.	Rate per 10,000 labor hours.					
	Accessions.	Separations.	Flux.	Accessions.	Separations.	Flux.
	1913-14.			1917-18.		
Automobiles and parts.....	5.2	5.4	10.6	7.7	7.6	15.3
Chemical industries and refineries.....	4.0	3.5	7.5	9.9	8.4	18.3
Clothing and textile manufacturing.....	2.1	2.2	4.3	4.2	4.7	8.9
Furniture and millwork.....				8.3	10.2	18.5
Leather and rubber goods.....	5.3	4.5	9.8	8.0	8.2	16.2
Machinery manufacturing.....	2.7	3.6	6.3	5.5	5.3	10.8
Mercantile establishments (wholesale and retail).....	2.4	2.2	4.6	4.6	4.8	9.4
Miscellaneous metal products manufacturing.....	2.7	3.1	5.8	10.6	10.1	20.7
Printing and publishing.....	2.3	2.2	4.5	5.9	6.3	12.2
Public utilities:						
Gas and electricity manufacturing.....	.5	1.0	1.5	4.6	4.7	9.3
Street railways.....	.9	.9	1.8	2.7	3.2	5.9
Telephone service.....	1.3	1.6	2.9	3.1	3.4	6.5
Slaughtering and meat packing.....	8.5	8.0	16.5	8.5	7.3	15.8
Total.....	3.1	3.3	6.4	6.9	6.7	13.6

Both Table 3 and Chart A show clearly the general increase of mobility rates over those of the prewar period and throw interesting side lights upon the influence of the war upon certain industries. Of the industry groups here represented, those which were most immediately affected by the necessity for articles of war are: Automobiles and parts, chemical industries, leather and rubber goods, machinery manufacturing, miscellaneous metal products, and slaughtering and meat packing. All of these groups, with one exception, show a decided increase in mobility rates over those of the prewar period. The rates of the slaughtering and meat-packing group show a slight decrease. This is not surprising in view of the fact that the mobility rate for this group in 1913-14 was already more than twice as great as the rate for all groups combined.

To undertake to show some definite relationship between the size of the establishment and labor mobility, detailed figures regarding the labor changes were so arranged as to show the mobility rates of establishments with less than 1,000 employees, of those having 1,000 and under 5,000, and of those with over 5,000 employees. In 1913-14 the flux rates for the different sizes of establishment in the order given above were 9.7, 5.9, and 6.2, respectively. The 1917-18 figures show flux rates of 17.3, 14.3, and 11.5, respectively. These figures in the main indicate a downward trend in mobility rates as the size of the establishment increases. It has not been possible to ascertain the exact reason for the relatively lower rates in the larger establishments, though it is conceivable that among the factors influencing the stability was the possibility of the larger establishments offering steadier work, relatively higher earnings, and better employment conditions generally. Lower rates might also indicate the efficiency of the employment department and the influence of the service and welfare activities which are generally carried on more extensively by the larger establishments.

CHART A.—LABOR FLUX RATES IN SPECIFIED INDUSTRY GROUPS
IN 1913-14 AND 1917-18.

Incidence of Labor Mobility in Special Groups within the Work Force.

ATTENTION should be called to the fact that labor mobility rates shown for a given year or for an industry group as a whole may fail to reveal the existence of very considerable variations in the amount of shifting within the divisions named and that further classification was necessary to reveal the real significance of the situation. This applies even more to the mobility of individual establishments for the reason that the shifting may be largely confined to a single occupation or a group of occupations, to the semi-skilled and unskilled employees, to employees of either sex, or to certain departments or shifts.

A study of the labor mobility in a large car-building establishment shows how greatly the mobility rates of the different occupation

groups vary from the rates for the whole establishment. For example, the flux rate of the total working force of this establishment is 18.0, while at the same time the rate for one occupation is zero and for another is 39.2. The figures of this establishment also show that although for the establishment as a whole there has been an excess of separations over accessions, this condition applies only to some of the occupation groups, while others show a number of accessions greater than the number of separations. The result is corresponding changes in the mobility rates.

The records of 22 of the establishments covered in the investigation of 1915 and 10 of those reported in the inquiry of 1918 were in such shape that it was possible to compare the stability records of skilled and unskilled workers. The figures are shown in Table 4.

TABLE 4.—LABOR MOBILITY OF SKILLED AND UNSKILLED WORKERS, 1913-1915 AND 1917-18.

[10 establishments reporting for 1913, 5 for 1914, and 7 for 1915; 10 establishments reporting for year ending May 31, 1918.]

Class of workers.	Number of workers.	Total labor hours.	Labor changes.		
			Accessions.	Separations.	Total (flux).
Number.					
1913-1915.					
Skilled.....	24,733	74,199,000	14,848	16,484	31,332
Unskilled.....	15,680	46,980,000	20,042	22,251	42,293
Total.....	40,393	121,179,000	34,890	38,735	73,625
1917-18.					
Skilled.....	16,169	48,507,000	21,919	24,830	46,749
Unskilled.....	4,408	13,224,000	19,661	19,203	38,864
Total.....	20,577	61,731,000	41,580	44,033	85,613
Rate per 10,000 labor hours.					
1913-1915.					
Skilled.....			2.0	2.2	4.2
Unskilled.....			4.3	4.7	9.0
Total.....			2.9	3.2	6.1
1917-18.					
Skilled.....			4.5	5.1	9.6
Unskilled.....			14.9	14.5	29.4
Total.....			6.7	7.1	13.8

The labor mobility rates for the two classes of labor show that in both periods unskilled labor was much more unstable than skilled labor. Moreover, this excess of instability on the part of the unskilled was much greater in the war period than in the prewar period. In the earlier period the mobility rates of the unskilled were more than double the rates for the skilled. In 1917-18 the mobility rates of the unskilled were three times as great as those of the skilled. In the earlier period there was, among the skilled, slightly more than 1 labor change for each skilled member of the working forces of the 22 plants and nearly 3 changes in unskilled jobs for each unskilled worker.

In 1917-18 there were nearly 3 skilled-labor changes for each skilled worker and about 9 unskilled-labor changes for each unskilled worker.

On the basis of figures secured from a machine-tool manufacturing plant the responsibility of the day and night forces, respectively, for the varying mobility rates is established. Over the 4-year period, 1916-1919, the flux rate per 10,000 labor hours for the day force was 7.5, that of the night force 20.9, and that of the day and night forces combined 10.1. The mobility of the night force is nearly three times as great as that of the day force and the former is, therefore, responsible for an extent of mobility entirely out of proportion to its numerical strength in the organization. Over the 4-year period the night force constituted about 20 per cent of the total working force but is chargeable with 45 per cent of the total number of labor changes. The greater shifting among the night workers thus causes the flux rate for the establishment as a whole to be 35 per cent higher than it would be if the labor changes in the night force were as infrequent, relatively, as those in the day force.

A special study of the relative labor mobility among males and females in the working forces of 45 establishments for the period 1917-18 resulted in the following mobility rates: Males, accession rate 5.6, separation rate 6, flux rate 11.6; females, accession rate 4.1, separation rate 3.7, flux rate 7.8. Although the rates for females are actually lower than those for males this can not be said to offer conclusive evidence that the shifting is generally less extensive among women, since the comparison of the mobility between males and females is not made invariably between employees in the same occupation and doing similar work. This is especially noticeable in industry groups in which the female labor force constitutes only a small fraction of the total working force and is composed almost entirely of clerical employees.

Analysis of Accessions.

IN CONNECTION with the subject of the general extent of labor mobility brief reference should be made to some particular phases of the mobility situation having to do with the accession of employees. One of these is the proportion of rehiring among the total accessions and the other is the relation between the number of applicants and the number actually hired. The number of accessions as reported in this article does not indicate the number of different individuals hired, since the accessions represent the total number of hirings in a given period and include original hirings as well as subsequent rehiring. Figures on the extent of rehiring were obtained by examination of the service records of employees on the pay rolls of six establishments at the end of 1915. These figures show that the hiring of 44,166 individuals involved 61,225 hirings and rehiring (repeated transactions), with a resultant increase in the number of accession transactions of nearly 40 per cent. Of the 44,166 individual employees taken on, more than 76 per cent had been hired once only, 15 per cent had been hired twice, over 5 per cent had been hired 3 times, more than 2 per cent 4 times, and about 1½ per cent had been hired and rehired more than 5 times. Among the employees under observation here the highest number of hirings and rehiring was 11, involving, however, only 2 employees out of more than 44,000.

The figures concerning the number of applicants for jobs are based upon the records of 8 establishments which kept account of the number of applicants for a longer or shorter period between 1912 and 1919 and indicate that with an aggregate number of workers amounting to 122,973 there were 1,041,475 applicants, of which number 145,509, or 14 per cent, were actually hired; this means, in other words, that for each person hired for a job there were more than 7 persons applying for it.

Nature of Separations.

IN ATTEMPTING to get some idea of the relative responsibility of the various influences bearing upon the mobility of labor it is highly important to give special consideration to the three types of separations, namely, voluntary separations or quits, discharges, and lay-offs. In Table 5 are given the number, rate per 10,000 labor hours, and the percentage of employees—discharged, laid off, and leaving voluntarily. Figures are shown for each year from 1910 to 1915, inclusive, and for the 12-month period ending May 31, 1918.

TABLE 5.—TYPE OF SEPARATION (DISCHARGE, LAY-OFF, OR VOLUNTARY QUITTING) OF EMPLOYEES LEAVING, BY YEARS FROM 1910 TO 1915, INCLUSIVE, AND FOR THE 12-MONTH PERIOD ENDING MAY 31, 1918.

Year.	Number of establishments.	Number of workers.	Total labor hours.	Accessions.	Separations.			
					Discharges.	Lay-offs.	Voluntary separations.	Total.
1910.....	7	23,273	69,819,000	15,936	2,608	514	14,230	17,352
1911.....	13	56,577	169,731,000	53,506	9,837	5,082	35,716	50,635
1912.....	20	72,526	217,578,000	78,843	13,628	4,057	49,806	67,491
1913.....	35	134,523	404,469,000	182,276	32,094	13,334	141,035	186,463
1914.....	50	118,195	354,585,000	82,585	19,565	29,737	46,660	95,962
1915.....	28	78,984	236,952,000	50,421	6,946	8,536	26,862	42,344
1917-18.....	108	207,303	621,909,000	393,164	51,400	29,833	299,157	380,390
Total.....	261	691,681	2,075,043,000	856,731	136,078	91,093	613,466	840,637

Year.	Rate per 10,000 labor-hours.					Percentage of total separations due to—		
	Accessions.	Separations.						
		Discharges.	Lay-offs.	Voluntary separations.	Total.	Discharges.	Lay-offs.	Voluntary separations.
1910.....	2.28	0.37	0.07	2.04	2.48	15	3	82
1911.....	3.15	.58	.30	2.10	2.98	19	10	71
1912.....	3.62	.63	.19	2.29	3.11	20	6	74
1913.....	4.51	.79	.33	3.49	4.61	17	7	76
1914.....	2.33	.55	.84	1.32	2.71	20	31	49
1915.....	2.13	.29	.36	1.13	1.78	16	20	63
1917-18.....	6.32	.83	.48	4.81	6.12	14	8	79
Total.....	4.13	.66	.44	2.96	4.06	16	11	73

The arresting fact shown in the above rate and percentage distribution figures is that the great bulk of all separations to-day, as in 1910, is due to voluntary leaving. It also appears from these figures that periods of industrial prosperity are reflected in relatively low, and periods of depression in relatively high, proportions of lay-offs

to total separations, and that the lay-off rate is the most sensitive of the three separation rates to changing industrial conditions. Thus, in 1914, when the ratio of quits to total separations was lower than at any other time during the period covered by the figures, the proportion of lay-offs was higher than at any other time, constituting nearly one-third (31 per cent) of all separations, while in the immediately preceding year 1913 lay-offs made up only 7 per cent of all separations. The rate figures indicate that it is not alone the proportion, but also the actual rate of lay-off which is thus affected by business activity and depression, the lay-off rate for 1913 being 0.33, a relatively low figure, and for 1914, 0.84, an exceedingly high rate for lay-offs. The discharge rate is evidently subject to less extreme fluctuations than the lay-off rate, and it makes up from year to year a more constant proportion of the total separations. There appears, moreover, to be a rather definite relation between the accession and discharge rates, due, possibly, to the process of selection which goes on when new workers are taken on in large numbers. The consequence of the stimulating effect of business prosperity in boosting the voluntary leaving rates may be seen in the high rates of total separation in spite of the fact that the lay-off rates are relatively low. In periods of depression both the rates and the proportions of lay-off and discharge are larger than in periods of prosperity. This is due to the fact that when depression sets in there are unusually large numbers laid off, and employees are discharged more freely than would be the case when labor is urgently needed.

The degree of occupational training and skill possessed by the employee appears to make little or no difference in the proportion of quits, discharges, and lay-offs in the total separation rate. Returns from 22 establishments reporting mobility figures for skilled and unskilled employees separately indicate that 76 per cent of all skilled and 72 per cent of all unskilled employees who leave, quit voluntarily; 15 per cent of the skilled and 19 per cent of the unskilled were discharged, and that 10 per cent of the skilled and 9 per cent of the unskilled were laid off. The situation is quite different, however, with regard to the actual rate of separation, the figures indicating conclusively that the lay-off, discharge, and quitting rates, and of course the total separation rate, are each higher for unskilled than for skilled workers, the total separation rates being, as already stated, 2.2 for skilled and 4.7 for unskilled workers. The rate for each of the three types of separation shows about the same relation between skilled and unskilled, so that it would appear that skilled workers are about twice as stable as semiskilled and unskilled.

Seasonal Influences on Labor Mobility.

TABLE 6, showing the monthly trend in flux rates from January, 1910, to December, 1919, inclusive, brings out in greater detail the extent to which mobility figures immediately reflect the industrial conditions prevailing at the time.⁷

⁷ Based upon following numbers of establishments reporting monthly figures: 1910, 3; 1911, 6; 1912, 8; 1913, 39; 1914, 26; 1915, 30; 1916, 10; 1917, 20; 1918, 19; 1919, 9.

TABLE 6.—LABOR FLUX RATES, BY MONTHS, FROM JANUARY, 1910, TO DECEMBER, 1919, INCLUSIVE.

Month.	Total labor change (flux) rate per 10,000 labor hours in—										Whole period, 1910-1919.
	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	
January.....	8.9	4.4	4.4	10.8	4.3	3.8	11.7	9.5	11.7	9.4	8.5
February.....	8.5	4.9	4.8	9.6	4.2	4.5	11.9	7.9	11.4	6.4	8.0
March.....	12.5	5.6	5.7	11.3	5.1	5.5	10.0	7.9	14.0	6.3	9.0
April.....	14.0	6.1	7.0	13.1	4.8	6.1	10.9	9.4	16.4	6.1	10.1
May.....	13.5	7.1	7.5	12.5	6.5	5.3	10.8	13.4	15.7	6.1	10.2
June.....	12.9	7.5	7.7	10.4	7.3	4.9	11.0	12.7	13.6	6.0	9.2
July.....	11.9	6.6	8.3	9.8	5.0	5.1	7.0	11.6	14.2	5.9	8.3
August.....	13.6	7.1	9.0	7.7	6.1	5.1	9.3	13.7	11.8	8.0	8.1
September.....	9.3	4.7	8.2	7.9	6.1	7.9	7.7	13.1	10.5	8.2	8.2
October.....	7.4	4.6	8.5	6.3	4.8	7.3	6.8	12.3	10.2	8.7	7.2
November.....	6.4	4.3	6.9	5.1	3.7	10.5	4.9	11.2	8.8	6.1	6.6
December.....	3.7	3.8	6.3	4.2	4.1	7.7	5.8	11.8	8.0	4.0	6.0
Year.....	10.1	5.6	7.0	9.1	5.1	6.1	8.8	11.4	12.7	6.7	8.3

To obtain a composite picture of the seasonality of labor mobility over a relatively long period of time and to show more particularly the psychological effects upon the shifting of labor of the distinctive physical conditions characterizing the seasons, Table 7 has been constructed. The mobility figures have been brought together in this table in such a way as to combine the figures for identical quarterly periods for each of the years from 1910 to 1919, inclusive; it is believed that by such a combination of the figures most of the influences upon mobility which are of a purely industrial character are neutralized and the influence of the seasons more accurately reflected.

TABLE 7.—EXTENT OF LABOR MOBILITY IN THE FOUR SEASONS OF THE YEAR.

[Based on the monthly data of the four seasons for all years from 1910-1919, combined. Replacement (or "turnover") numbers and rates are printed in boldfaced type.]

Month.	Number of workers.	Total labor hours.	Labor changes.		
			Accessions.	Separations.	Total (flux).
March, April, May.....	471,738	353,803,000	180,482	165,145	345,927
June, July, August.....	464,579	348,432,000	150,225	146,828	297,053
September, October, November.....	479,036	359,278,000	142,886	119,245	262,131
December, January, February.....	470,076	352,556,000	142,023	120,781	262,804
Total.....	471,357	1,414,069,000	615,616	552,299	1,167,915
			Rate per 10,000 labor hours.		
March, April, May.....			5.10	4.68	9.78
June, July, August.....			4.31	4.21	8.52
September, October, November.....			3.98	3.32	7.30
December, January, February.....			4.03	3.43	7.46
Total.....			4.35	3.91	8.26

The figures in Table 7 and the labor flux rates given in Table 6, for each month of the years 1910 to 1919 combined, show a tendency to maximum labor mobility in the spring and a gradual lessening of mobility during the summer and early fall.

The flux figures of Table 6 and, in addition, the corresponding accession and separation rates are plotted on Chart B. Since replacement rates, as explained above, correspond with accession rates when the accession rates are lower than the separation rates and with separation rates when the separation rates are lower than accession rates, it follows that the lowest points on the chart mark the rate and trend of labor replacement. That is to say, whichever line happens to be the lowest marks replacement.

Length of Service as a Factor in Labor Mobility.

IN THE preceding discussion of labor mobility one very important factor, that of length of service, has not been touched upon. Monthly and yearly figures expressed in the form of accession, separation, and flux rates are valuable for the purpose of showing the general extent of mobility in the labor force as a whole and its trend during any given period of time. Such figures, however, do not throw much light on the degree of stability within the working force in so far as it relates to the length of service of the active as well as the separated employees; without such figures no correct idea can be formed of the relative extent of labor mobility.

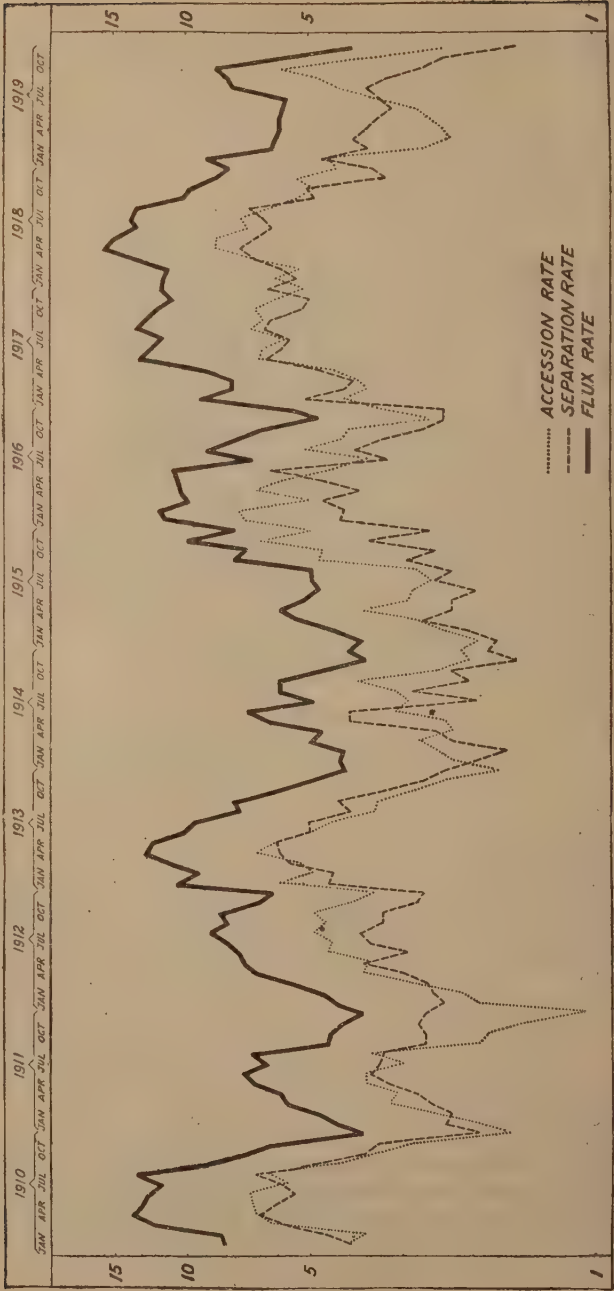
The experience of 34 establishments in 1913-14 and 53 in 1917-18, which furnished comprehensive figures on the length of service of their active employees, as well as of those who left their employ, is summarized in Table 8.

TABLE 8.—LENGTH-OF-SERVICE DISTRIBUTION OF "ACTIVE EMPLOYEES" (THOSE ON PAY ROLL AT END OF YEAR) AND OF EMPLOYEES WHO LEFT DURING THE YEAR ("SEPARATING EMPLOYEES").

[Number of establishments reporting, 1913-14: 34; 1917-18: 53.]

Length-of-service group.	Number in each group.			
	On pay roll at end of year—		Separated from service during year—	
	1913-14	1917-18	1913-14	1917-18
1 week or less.....		1,615		16,476
Over 1 week to 2 weeks.....		1,793		9,664
Over 2 weeks to 1 month.....		2,943		11,541
Over 1 month to 3 months.....		7,055		18,912
Three months or less.....	13,365	13,411	28,407	56,593
Over 3 months to 6 months.....	6,396	6,019	8,516	11,770
Over 6 months to 1 year.....	7,188	9,018	7,497	9,813
Over 1 year to 2 years.....	10,446	10,458	4,415	6,645
Over 2 years to 3 years.....	9,632	6,627	2,162	2,476
Over 3 years to 5 years.....	12,980	6,320	1,845	2,780
Over 5 years.....	28,443	19,916	1,776	3,015
Total.....	86,450	71,769	51,618	93,092
Length-of-service group.	Per cent in each group.			
	On pay roll at end of year—		Separated from service during year—	
	1913-14	1917-18	1913-14	1917-18
1 week or less.....		2.3		17.7
Over 1 week to 2 weeks.....		2.5		10.4
Over 2 weeks to 1 month.....		4.1		12.4
Over 1 month to 3 months.....		3.8		20.3
Three months or less.....	13.1	12.7	52.0	60.8
Over 3 months to 6 months.....	7.4	8.4	15.6	12.6
Over 6 months to 1 year.....	8.3	12.6	13.7	10.5
Over 1 year to 2 years.....	12.1	14.6	8.1	7.1
Over 2 years to 3 years.....	11.1	9.2	4.0	2.7
Over 3 years to 5 years.....	15.0	8.8	3.4	3.0
Over 5 years.....	32.9	27.8	3.3	3.2
Total.....	100.0	100.0	100.0	100.0

CHART B.—FLUCTUATIONS IN LABOR MOBILITY, BY MONTHS, FROM JANUARY, 1910, TO DECEMBER, 1919, INCLUSIVE.



If we consider those employees having to their credit not more than one year of service as short-service employees, it will be noticed in this table that the proportion of such employees in the active work force is rather extensive. On the other hand, considerable proportions among the active employees had long-service records. The figures for those separated, however, present a striking contrast and undoubtedly reflect the influences of unusual industrial activity in both of the periods studied, but more especially the effect of war-time conditions upon labor mobility. In the period 1917-18, out of a total of 93,092 separated employees, over 40 per cent had on severing their connections served periods of one month or less, about 33 per cent had worked from one to six months, 10.5 per cent from six months to one year; a total of 84 per cent had to their credit continuous-service records of one year or less.

In both periods there was a considerable exodus of long-service employees; 18.8 per cent of all separating employees in 1913-14 and 16 per cent in 1917-18 were employees with service records of over one year. Nevertheless the census of the active employees taken at the end of the period shows large proportions of employees of long tenure. The figures for 1913-14 show 38.2 per cent with continuous-service records of from one to five years, and 32.9 per cent with service records of over five years; and the figures for 1917-18 show 32.6 per cent of all active employees with service records of from one to five years and 27.8 per cent with continuous-service records of over five years.

A count of the actual length of service of 439 separated employees in two establishments in the one-week-or-less group showed the number of employees having had specified days of service to be as follows: Less than one day of service, 21 employees; one day, 94 employees; 2 days, 57 employees; 3 days, 54 employees; 4 days, 48 employees; 5 days, 54 employees; 6 days, 111 employees. This shows that over 25 per cent worked one day or less, about 50 per cent worked from two to five days, and only a little over 25 per cent worked a full week.

A separate study of the relative proportions of active and separated employees in the different industry groups reveals considerable variation from the figures given above. Some of these groups show that as high a proportion as 30 per cent of all separated employees of the period 1917-18 had worked one week or less, while in other groups the proportion of the separated employees who had served three months or less was as high as from 60 to 80 per cent.

The relation between the degree of skill and the length of service of both active and separated employees was made the subject of a special inquiry reporting the experience of 17 establishments covering the years 1913, 1914, and 1915. Briefly, the figures indicate that only about one-tenth of the skilled employees on the pay roll, but nearly one-fourth of the unskilled had served as short a time as three months or less. The proportions of the skilled and unskilled active employees who had served from one to five years are about the same; in the over-five-years service group of active employees there is a considerable difference, however, the proportion of skilled in that group being 33.3 per cent, whereas the proportion of unskilled is only 16.6 per cent. Among the separated employees it is only in the long-service groups that there is any decided difference in the relative

proportions of skilled and unskilled employees. The unskilled separating employees show a slightly higher percentage in the length of service groups of one year or less, the figures being 81.7 per cent for skilled and 86.7 per cent for unskilled; in the over-one-to-five-year groups the proportion of skilled separated employees is 14.5 per cent, and that of the unskilled 11.6 per cent; in the over-five-year group the skilled represented 3.9 per cent and the unskilled 1.7 per cent of the total separations.

A study of the length-of-service figures of the active working force of 28 establishments for the period 1917-18, classified according to sex, shows the proportions of the sexes to be about equally divided in the lower length-of-service groups, the females having higher proportions in the service groups between six months and five years, while the males show a much greater proportion in the over-five-year group. A comparison of the length of service of the separated male and female employees for the year ending May 31, 1918, shows that larger proportions of separating male employees than of females are bunched in the short-service periods. Thus, 63 per cent of the total number of separating males as against 50 per cent of the females had served less than three months. In the six-months-to-one-year groups the proportions are about equally divided. In the long-time-service groups of separated employees the figures for males show that they are less prone to sever connections with an establishment after having worked in it a considerable period of time. Of all the separating females whose service records were reported, 18.7 per cent had served from one to five years, whereas only 11.3 per cent of all the separating males had served from one to five years. Finally, of the employees leaving after having served continuously more than five years, 3.6 per cent were males and 6 per cent were females.

Stable and Unstable Employees.

IN THE discussion of the figures on the length of service of the active working force attention has been called to the fact that in each establishment at a given time there will be found long-service employees who can not be said to have been a factor in the mobility in a period over which they have served continuously. This brings out the fact that there is more or less concentration in the mobility of the plant forces, and for that reason the rates of mobility as applied to the working force as a whole do not correctly assign the direct responsibility for the labor flux. It is evident that the rates of mobility will be the same if the whole working force changes completely once in the course of a year, or, if one-half of the working force changes two times, or, one-fourth of the working force changes four times in the course of a year, and so on. In the presentation of the figures that follow an attempt is made to show by means of length-of-service figures exactly what proportion of the work force is responsible for the labor mobility. The detailed figures on length of service given in Table 8 show that of the 71,769 persons on the pay rolls in 53 establishments on June 1, 1918, 43,321, or 60 per cent, had been in continuous service over one year. These long-service employees were in no way responsible for the labor mobility of these establishments for the 12-month period ending with that date. In

Table 9 the base upon which the rate of mobility is measured is that part of the working force which directly contributed to it.

TABLE 9.—COMPARISON OF LABOR MOBILITY RATES BASED ON THE TOTAL WORKING FORCE WITH THE RATES BASED ON THE UNSTABLE PART OF THE WORKING FORCE, YEAR ENDING MAY 31, 1918.

Number of establishments.	Total working force. ¹	Unstable part of working force.	Per cent that unstable part of working force is of total working force.	Labor hours worked by—		Labor changes.		
				Total working force.	Unstable part of working force.	Accessions.	Separations.	Total (flux).
53.....	69,553	26,232	38	208,659,000	78,696,000	93,206	96,207	189,413

Number of establishments.	Rate per 10,000 labor hours, based on total working force.			Rate per 10,000 labor hours, based on unstable working force.		
	Accessions. ²	Separations. ²	Flux. ²	Accessions. ²	Separations. ²	Flux. ²
53.....	4.5	4.6	9.1	11.8	12.2	24.0

¹ This number is 2,216 less than the number on the pay roll of the 53 establishments at the end of May, 1918, as shown in Table 8, the labor time of the employees with less than one year's continuous service having been reduced to equivalent full year or 3,000-hour workers.

² Represents ratio of labor changes (accessions, separations, and flux) to labor hours of total working force.

³ Represents ratio of labor changes (accessions, separations, and flux) to labor hours of unstable part of working force.

This table shows that in these 53 establishments with a working force of 69,553 there were at the end of the year 43,321 employees, or 62 per cent of the total number on the pay roll who had service record of over one year. Those employees were not responsible for any of the labor changes that took place during the year. The labor mobility in the 53 establishments was, therefore, concentrated upon 26,232 workers, or 38 per cent of the total working force. This relatively small part of the working force was responsible for all the labor changes which took place during the year, amounting to 93,206 accessions and 96,207 separations, a labor flux of 189,413 persons. This means that for every worker of the unstable working force more than 3 persons were hired and nearly 4 persons left employment, or that altogether there were more than 7 labor changes for each worker. A comparison of the labor mobility of the stable and unstable working force shows the labor mobility rates based on the labor hours of the unstable part of the work force to be nearly three times as great as the labor change rates based upon the labor hours of the whole working force.

Effect of Employment Policy on Labor Stability.

THE definite effectiveness of liberal labor policies and centralized systems of employment is demonstrated, in so far as it is possible to demonstrate such things in statistical terms, by the figures presented in Table 10. This table shows, by years, for the period from 1913 to 1919, inclusive, the mobility rates of 10 selected firms and of all other firms reporting. The 10 concerns were chosen not only because they had definite labor policies and centralized employment

machinery, but also on account of the fact that they had had considerable success in stabilizing their work forces and keeping their labor flux rates at relatively low levels.

TABLE 10.—COMPARISON OF LABOR MOBILITY IN 10 SELECTED ESTABLISHMENTS WITH ITS MOBILITY IN ALL OTHER ESTABLISHMENTS REPORTING FOR THE CALENDAR YEARS 1913 TO 1919, INCLUSIVE.

[Replacement (or "turnover") rates are printed in boldfaced type.]

Year.	Labor change rates per 10,000 labor hours.					
	10 selected establishments.			All other establishments reporting.		
	Accession.	Separation.	Flux.	Accession.	Separation.	Flux.
1913.....	5.4	5.5	10.9	4.4	4.3	8.7
1914.....	1.1	1.5	2.6	2.8	3.1	5.9
1915.....	1.6	.8	2.4	3.0	2.6	5.6
1916.....	2.6	1.4	4.0	6.2	4.5	10.7
1917.....	1.7	1.9	3.6	5.8	5.7	11.5
1918.....	3.4	2.7	6.1	7.4	6.2	13.6
1919.....	3.2	2.4	5.6	3.6	3.4	7.0
Total.....	2.8	2.3	5.1	3.8	3.7	7.5

This table shows in very striking fashion that the 10 selected concerns have brought about a considerable reduction in the extent of their labor flux and have suffered a much slighter decrease in stability during the war period than did the general run of establishments.

This comparison of achievements shows the vital importance from the standpoint of the industrial establishment, of studying this subject of labor mobility, the necessity of observing the employment and personnel methods currently practiced by the more far-sighted employers, the desirability of keeping systematic and continuous employment records in order to measure the effects of different methods and policies upon labor stability, and the imperative need for the more widespread adoption by employers generally of such labor and employment policies as will be most effective in eliminating from our industrial life the evil and the waste of excessive labor mobility.

PRICES AND COST OF LIVING.

Retail Prices of Food in the United States.

THE following tables are based on figures which have been received by the Bureau of Labor Statistics from retail dealers through monthly reports of actual selling prices.¹

Table 1 shows for the United States retail prices of food on March 15 and April 15, 1920, and on April 15, 1919, as well as the percentage changes in the month and in the year. For example, the price of a pound of potatoes in April, 1919, was 3.1 cents; in March, 1920, 6.8 cents; and in April, 1920, 9.1 cents. These figures show an increase of 34 per cent in the month and an increase of 194 per cent in the year. The cost of 22 articles combined² increased 5 per cent in the month and 16 per cent in the year.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, APR. 15, 1920, COMPARED WITH APR. 15, 1919, AND MARCH 15, 1920.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (—) Apr. 15, 1920, compared with—	
		Apr. 15, 1919.	Mar. 15, 1920.	Apr. 15, 1920.	Apr. 15, 1919.	Mar. 15, 1920.
		<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>		
Sirloin steak.....	Pound.....	43.7	40.8	43.2	— 1	+ 6
Round steak.....	do.....	40.5	37.5	39.9	— 1	+ 6
Rib roast.....	do.....	34.6	31.9	33.5	— 3	+ 5
Chuck roast.....	do.....	29.4	25.1	26.6	— 10	+ 6
Plate beef.....	do.....	22.6	18.2	19.0	— 16	+ 4
Pork chops.....	do.....	41.4	39.1	43.2	+ 4	+ 10
Bacon.....	do.....	57.2	50.2	51.7	— 10	+ 3
Ham.....	do.....	52.9	51.2	53.6	+ 1	+ 5
Lamb, leg of.....	do.....	39.9	39.8	43.0	+ 8	+ 8
Hens.....	do.....	43.0	45.7	47.8	+ 11	+ 5
Salmon, canned.....	do.....	32.2	37.6	37.8	+ 17	+ 1
Milk, fresh.....	Quart.....	15.0	16.6	16.3	+ 9	— 2
Milk, evaporated (unsweetened).....	15-16 oz. can.....	15.0	15.1	14.4	— 4	— 5
Butter.....	Pound.....	71.3	75.2	76.1	+ 7	+ 1
Oleomargarine.....	do.....	39.2	43.1	43.2	+ 10	+ 0.2
Nut margarine.....	do.....	35.2	36.1	36.1	+ 3	0
Cheese.....	do.....	41.9	42.8	42.8	+ 2	0
Lard.....	do.....	35.3	30.4	30.1	— 15	— 1
Crisco.....	do.....	33.4	37.5	37.5	+ 12	0
Eggs, strictly fresh.....	Dozen.....	49.3	55.6	52.8	+ 7	— 5
Bread.....	Pound.....	9.8	11.2	11.2	+ 14	0

¹ In addition to retail prices of food, the Bureau secures prices of coal, gas, and dry goods from each of 51 cities, and publishes these prices as follows: Coal, in the March and September issues of the MONTHLY LABOR REVIEW; gas, in the June issue; dry goods, in the April, July, October, and December issues.

² The following are the 22 articles, weighted according to the consumption of the average family: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, tea. These include all articles for which prices have been secured each month since 1913 with the exception of lamb, for which the Bureau has no consumption figures.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, APR. 15, 1920, COMPARED WITH APR. 15, 1919, AND MARCH 15, 1920—Concluded.

Article.	Unit.	Average retail price on—			Per cent of increase (+) or decrease (−) Apr. 15, 1920, compared with—	
		Apr. 15, 1919.	Mar. 15, 1920.	Apr. 15, 1920.	Apr. 15, 1919.	Mar. 15, 1920.
		Cents.	Cents.	Cents.		
Flour.....	Pound.....	7.2	8.0	8.1	+ 13	+ 1
Corn meal.....	do.....	6.0	6.5	6.5	+ 8	0
Rollod oats.....	do.....	8.4	10.3	10.4	+ 24	+ 1
Corn flakes.....	8-oz. pkg.....	14.0	14.1	14.1	+ 1	0
Cream of Wheat.....	28-oz. pkg.....	25.0	29.7	29.9	+ 20	+ 1
Macaroni.....	Pound.....	19.3	20.2	20.3	+ 5	+ 0.4
Rice.....	do.....	13.4	18.4	18.6	+ 39	+ 1
Beans, navy.....	do.....	12.1	11.9	11.8	− 2	− 1
Potatoes.....	do.....	3.1	6.8	9.1	+194	+34
Onions.....	do.....	6.9	9.4	10.1	+ 46	+ 7
Cabbage.....	do.....	9.1	8.7	9.2	+ 1	+ 6
Beans, baked.....	No. 2 can.....	17.7	16.8	16.8	− 5	0
Corn, canned.....	do.....	19.2	18.5	18.5	− 4	0
Peas, canned.....	do.....	19.0	19.0	19.0	0	0
Tomatoes, canned.....	do.....	15.9	15.1	15.1	− 5	0
Sugar, granulated.....	Pound.....	10.6	18.7	20.2	+ 91	+ 8
Tea.....	do.....	69.7	73.2	73.3	+ 5	+ 0.1
Coffee.....	do.....	38.5	49.1	49.1	+ 28	0
Prunes.....	do.....	21.9	28.7	28.4	+ 30	− 1
Raisins.....	do.....	16.3	26.4	26.9	+ 65	+ 2
Bananas.....	Dozen.....	37.6	41.4	41.7	+ 11	+ 1
Oranges.....	do.....	55.5	62.0	64.6	+ 16	+ 4
22 weighted articles ¹.....	.....	.....	.....	.....	+16	+ 5

¹ See note 2, p. 57.

Table 2 shows for the United States average retail prices of specified food articles on April 15 of each year, 1913 to 1920, together with the percentage change in April of each year compared with April, 1913. For example, as compared with the price in April, 1913, potatoes showed an increase of 20 per cent in 1914. In April, 1915, the price was the same as in April, 1913. As compared with April, 1913, the price in April, 1916, showed an increase of 53 per cent; in April, 1917, an increase of 287 per cent; in April, 1918, an increase of 47 per cent; in April, 1919, an increase of 107 per cent; and in April, 1920, an increase of 507 per cent. This means that the retail price of potatoes in April, 1920, was a little over 6 times as much as it was in April, 1913.

The cost of 22 articles, combined, increased 115 per cent during the seven-year period.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE APR. 15 OF EACH YEAR, 1914 TO 1920, COMPARED WITH APR. 15, 1913.

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers.]

Article.	Unit.	Average retail price, Apr. 15—								Per cent of increase (+) or decrease (-) Apr. 15 of each specified year compared with Apr. 15, 1913.							
		1913	1914	1915	1916	1917	1918	1919	1920	1914	1915	1916	1917	1918	1919	1920	
		<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>	<i>Cts.</i>								
Sirloin steak....	Lb.	25.5	25.4	25.1	27.0	31.7	36.6	43.7	43.2	-0.4	-	2	6	24	44	71	
Round steak....	Lb.	22.2	23.0	22.3	24.0	29.0	34.5	40.5	39.9	+	4	0	8	31	55	82	
Rib roast.....	Lb.	20.0	20.1	19.7	21.1	25.2	29.3	34.6	33.5	+	1	2	6	26	47	73	
Chuck roast....	Lb.	16.2	16.4	15.8	16.9	20.9	25.5	29.4	26.6	+	1	2	4	29	57	81	
Plate beef.....	Lb.	12.2	12.4	12.1	12.7	16.0	19.9	22.6	19.0	+	2	1	4	31	63	85	
Pork chops....	Lb.	21.6	21.7	19.7	22.5	30.6	35.6	41.4	43.2	+0.4	-	9	4	42	65	92	
Bacon.....	Lb.	26.8	26.8	26.4	28.1	38.2	49.5	57.2	51.7	0	-	1	5	43	85	113	
Ham.....	Lb.	26.5	26.6	25.4	28.7	36.5	44.6	52.9	53.6	+0.4	-	4	8	38	68	100	
Lamb, leg of....	Lb.	20.2	19.3	21.0	23.0	27.6	35.3	39.9	43.0	-	4	4	14	37	75	98	
Hens.....	Lb.	22.2	23.0	21.3	23.7	29.1	(1)	43.0	47.8	+	4	4	7	31	(1)	94	
Salmon (canned)	Lb.			19.8	20.0	23.6	29.5	32.2	37.8								
Milk, fresh.....	Qt.	8.9	8.9	8.8	8.8	10.1	13.2	15.0	16.3	0	-	1	1	13	48	69	
Milk, evaporated (unsweetened).	(2)							15.0	14.4								
Butter.....	Lb.	40.4	32.9	35.9	41.3	51.0	50.7	71.3	76.1	-	19	-	11	2	26	76	
Oleomargarine....	Lb.							39.2	43.2								
Nut margarine....	Lb.							35.2	36.1								
Cheese.....	Lb.	22.0	23.0	23.3	24.9	33.1	34.1	41.9	42.8	+	5	6	13	50	55	90	
Lard.....	Lb.	15.8	15.6	15.1	15.7	26.4	33.1	35.3	30.1	-	1	-	1	67	109	123	
Crisco.....	Lb.							33.4	37.5								
Eggs, strictly fresh.....	Doz.	25.2	25.5	26.0	27.3	38.7	42.5	49.3	52.8	+	1	3	8	54	69	96	
Bread.....	Lb.	5.6	6.2	7.1	7.6	8.4	9.8	9.8	11.2	+	11	27	25	50	75	100	
Flour.....	Lb.	3.3	3.3	4.5	3.9	6.8	6.6	7.2	8.1	0	+	36	18	106	100	118	
Corn meal.....	Lb.	2.9	3.1	3.3	3.2	4.6	7.1	6.0	6.5	+	7	14	10	59	145	107	
Rolled oats.....	Lb.							8.4	10.4								
Cornflakes.....	(3)							14.0	14.1								
Cream of Wheat.	(4)							25.0	29.9								
Macaroni.....	Lb.							19.3	20.3								
Rice.....	Lb.	8.6	8.7	9.1	9.1	9.4	12.1	13.4	18.6	+	1	6	6	9	41	56	
Beans, navy.....	Lb.			7.7	9.4	16.7	18.0	12.1	11.8								
Potatoes.....	Lb.	1.5	1.8	1.5	2.3	5.8	2.2	3.1	9.1	+	20	0	53	287	47	107	
Onions.....	Lb.			3.6	4.8	13.4	3.3	6.9	10.1								
Cabbage.....	Lb.							9.1	9.2								
Beans, baked.....	(5)							17.7	16.8								
Corn, canned.....	(5)							19.2	18.5								
Peas, canned.....	(5)							19.0	19.0								
Tomatoes, canned.	(5)							15.9	15.1								
Sugar, granulated.	Lb.	5.4	5.0	6.7	8.0	9.6	9.1	10.6	20.2	-	7	21	48	75	69	96	
Tea.....	Lb.	54.3	54.5	54.4	54.6	54.9	63.9	69.7	73.3	+0.4	+0.2	+	1	1	15	28	
Coffee.....	Lb.	29.8	29.7	30.0	29.9	30.0	30.1	38.5	49.1	-0.3	-	1	0.3	+	1	29	
Prunes.....	Lb.			13.7	13.3	14.5	16.6	21.9	28.4								
Raisins.....	Lb.			12.5	12.6	11.2	15.1	16.3	26.9								
Bananas.....	Doz.							37.6	41.7								
Oranges.....	Doz.							55.5	64.6								
22 weighted articles. ⁶										-	1	1	9	47	57	85	

¹ No hens sold in April, 1918, by order of Food Administration.² 15-16-ounce can.³ 8-ounce package.⁴ 28-ounce package.⁵ No. 2 can.⁶ See note 2, p. 57.

Relative Retail Prices of 22 Articles of Food.

IN TABLE 3 the average monthly and yearly prices of 22 food articles³ are shown as relative prices or percentages of the average prices for the year 1913. These relatives are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. Relative prices must be used with caution. For example, the relative price of pork chops in November, 1919, was 200, which means that the money price was 200 per cent of the money price in 1913, or, in other words, the price doubled. The relative price of pork chops in December was 181, showing a drop of 19 points from 200, which is a decrease of only 9.5 per cent.

In the last column of this table are given index numbers⁴ showing the changes by months and years in the retail cost of the 22 food articles weighted according to the importance of each article in the consumption of the average family. Prices are obtained each month for 43 food articles, but only 22 of these are included in the retail food price index because the amounts consumed by the average family have been obtained as yet for only these 22 food articles. These articles comprise about two-thirds of the entire food budget of the average family and reflect with great accuracy changes in the cost of the food budget. The figure representing the cost of these 22 food articles was 200 in March and 211 in April. This shows that, as compared with 1913, the cost of these food articles was in April, 1920, more than double what it was in 1913, and that during the month from March to April there was an increase of 5 per cent in the cost of these articles.

The curve shown in the chart on page 64 pictures more readily to the eye the changes in the cost of the family market basket and the trend in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale⁵ because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

³ For list of articles, see note 2, p. 57.

⁴ For a discussion of the method used in the computation of these index figures, see MONTHLY LABOR REVIEW for March, 1920, p. 34.

⁵ For a discussion of the logarithmic chart, see article on "Comparison of arithmetic and ratio charts" by Lucian W. Chaney, MONTHLY LABOR REVIEW for March, 1919, pp. 20-34. Also, "The 'ratio' chart," by Prof. Irving Fisher, reprinted from Quarterly Publications of the American Statistical Association, June, 1917, 24 pp.

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907 TO APRIL, 1920.

Year and month.	Sirloin steak.	Round steak.	Rib roast.	Chuck roast.	Plate beef.	Pork chops.	Ham.	Lard.	Hens.	Eggs.	Butter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Potatoes.	Sugar.	Coffee.	Tea.	22 weight- ed art- icles.
1907.	71	68	76	74	74	74	76	81	81	84	85	87	87	95	88	105	105	105	105	105	105	82
1908.	73	71	78	77	76	76	78	80	83	86	86	90	90	102	92	111	111	111	108	108	108	84
1909.	77	74	81	83	83	83	82	80	89	93	90	91	91	109	94	112	112	112	107	107	107	89
1910.	80	78	85	91	92	92	91	104	94	98	94	95	95	108	95	130	130	130	109	109	109	93
1911.	81	79	85	91	91	91	88	91	93	93	94	96	96	102	94	130	130	130	111	111	111	92
1912.	91	89	94	91	91	91	91	94	93	99	98	97	97	115	102	132	132	132	115	115	115	98
1913: Av. for year.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
January.	94	92	95	93	93	93	92	93	92	108	107	100	100	100	100	99	99	91	106	106	106	98
February.	97	96	98	98	98	98	97	97	97	91	108	100	100	100	100	98	98	99	100	100	100	97
March.	101	99	101	101	101	101	99	100	104	76	94	99	99	100	100	98	98	99	99	99	99	97
April.	102	101	102	102	102	102	102	100	104	76	94	99	99	100	100	98	98	99	99	99	99	97
May.	104	104	102	103	103	103	104	104	102	81	92	99	99	100	101	98	99	91	97	97	97	98
June.	104	104	102	103	103	103	104	104	102	81	92	99	99	100	101	98	99	91	97	97	97	98
July.	104	104	102	103	103	103	104	104	102	81	92	99	99	100	101	98	99	91	97	97	97	98
August.	103	104	101	103	102	108	104	104	102	101	96	92	99	100	100	100	100	110	104	104	104	100
September.	101	104	101	103	102	107	103	102	101	109	98	100	100	100	100	100	100	110	104	104	104	101
October.	100	102	100	102	102	107	103	102	101	100	121	100	100	100	100	100	100	110	104	104	104	101
November.	99	101	100	101	101	97	99	101	97	144	101	102	102	100	100	100	100	110	104	104	104	101
December.	102	106	103	104	104	105	102	99	102	102	94	104	102	100	100	100	100	110	104	104	104	101
1914: Av. for year.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
January.	99	102	100	102	102	99	98	99	100	126	104	104	102	110	98	108	108	99	99	99	99	102
February.	100	103	101	103	103	100	99	99	104	106	93	104	102	110	98	108	108	99	99	99	99	101
March.	100	103	102	103	103	100	99	99	105	90	92	105	102	110	99	103	103	94	100	100	100	99
April.	102	105	102	103	103	106	99	99	108	74	86	104	100	110	99	103	103	105	91	91	91	98
May.	103	106	103	104	103	106	99	99	106	77	85	103	100	110	99	103	103	112	91	91	91	99
June.	106	109	105	106	104	106	100	97	103	82	88	103	100	110	99	103	103	132	93	93	93	99
July.	110	113	108	109	107	119	107	108	99	104	96	94	103	110	98	103	103	155	95	95	95	101
August.	107	110	105	108	107	113	108	99	103	107	98	104	100	112	106	105	101	143	100	101	101	107
September.	103	107	104	106	106	110	103	108	98	113	98	104	100	114	103	103	101	105	145	100	101	107
October.	100	105	103	104	105	104	104	102	99	131	98	104	101	114	103	103	101	99	132	99	101	105
November.	101	103	101	103	103	93	100	97	97	139	103	104	101	114	103	103	101	89	113	99	101	105
December.	101	103	101	101	103	96	100	97	93	99	93	105	99	116	103	107	101	84	110	99	101	105
1915: Av. for year.	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
January.	98	100	100	101	102	88	101	98	97	95	129	101	105	120	124	108	104	89	120	101	100	101
February.	97	99	99	99	101	85	98	97	97	98	98	106	100	126	133	110	104	85	110	101	100	103
March.	97	99	99	99	100	83	98	96	97	94	94	106	99	126	136	110	104	84	118	101	100	101
April.	97	99	99	99	100	83	98	96	97	94	94	106	99	126	136	110	104	84	118	101	100	101
May.	101	103	101	101	101	90	98	96	100	75	94	106	99	126	137	109	104	86	122	101	100	99
June.	103	105	103	103	101	98	99	97	95	76	91	106	98	128	139	109	104	88	124	101	100	100
July.	105	107	104	103	101	98	99	93	98	78	90	105	98	128	130	109	104	89	126	101	100	100
August.	104	107	104	103	101	100	98	93	97	81	90	105	98	126	125	108	104	85	127	101	100	100
September.	104	106	103	101	101	107	97	88	97	88	88	103	99	126	124	108	104	82	123	101	100	101

TABLE 3.—RELATIVE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, 1907 TO APRIL, 1920—Continued.

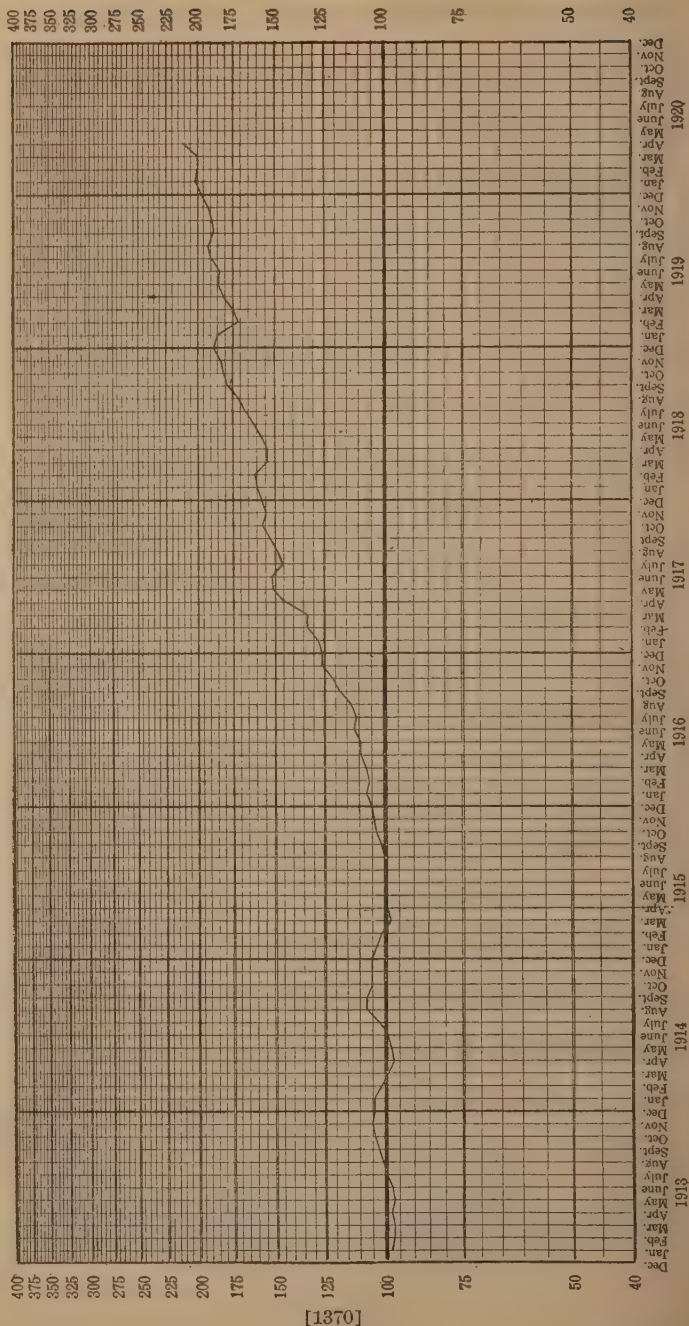
Year and month.	Strain Round steak.	Rib roast.	Chuck roast.	Plate beef, chops.	Bacon.	Lard.	Eggs.	Butter.	Cheese.	Milk.	Bread.	Flour.	Corn meal.	Rice.	Potatoes.	Sugar.	Coffee.	Tea.	22 weight- ed arti- cles.
1915, etc.—Concluded.																			
October.....	103	104	101	99	101	99	97	92	104	100	124	113	108	104	94	111	100	100	103
November.....	101	102	101	98	101	100	92	95	105	100	122	113	107	104	97	109	100	100	104
December.....	99	101	99	98	101	100	92	95	107	100	122	114	107	104	106	124	100	100	105
1916: Av. for year.	108	110	107	106	103	109	111	109	117	102	130	135	113	105	155	146	100	100	114
January.....	101	102	101	99	101	101	101	103	110	100	122	129	107	105	136	123	100	100	107
February.....	101	102	102	100	102	102	104	101	112	100	124	125	108	104	141	125	100	100	106
March.....	104	104	103	102	104	104	107	105	113	100	124	120	107	104	140	137	100	100	107
April.....	106	108	106	105	107	104	107	108	113	99	124	119	108	104	138	145	100	100	109
May.....	109	112	109	107	109	105	113	82	97	112	99	124	119	108	140	156	100	100	109
June.....	113	117	113	111	110	107	110	87	111	99	124	117	108	104	167	158	100	100	112
July.....	113	116	112	109	111	110	113	93	110	100	124	116	108	100	158	160	100	100	111
August.....	112	115	111	107	108	111	111	102	116	101	126	134	110	105	141	165	100	100	113
September.....	111	115	110	107	108	111	113	120	102	102	136	138	113	105	161	141	100	100	118
October.....	108	111	108	106	118	110	114	123	122	105	144	155	117	105	165	149	100	100	121
November.....	106	108	106	106	106	110	114	137	114	132	169	174	126	105	198	157	100	100	126
December.....	106	107	106	106	106	110	114	118	140	112	138	167	131	106	198	151	100	100	126
1917: Av. for year.	124	130	131	130	152	142	175	134	150	125	164	211	192	113	253	169	101	107	146
January.....	109	111	109	108	113	110	114	136	119	118	141	171	135	104	225	146	100	100	128
February.....	113	117	114	116	125	114	118	138	126	147	142	171	136	104	290	148	100	100	133
March.....	116	119	118	121	133	123	125	151	129	101	146	174	137	104	207	160	101	101	133
April.....	125	130	131	132	146	141	136	167	136	112	150	206	154	108	339	175	101	101	145
May.....	127	133	130	134	135	146	155	145	176	138	168	206	178	121	352	183	101	103	151
June.....	129	135	132	137	148	158	145	177	153	119	170	246	182	135	366	170	101	104	152
July.....	129	137	130	137	151	159	147	174	149	125	176	220	195	133	245	166	103	110	146
August.....	130	138	129	136	164	160	147	176	148	128	182	229	219	122	266	181	102	111	149
September.....	131	133	131	137	185	164	152	188	142	132	176	223	272	124	172	179	102	112	163
October.....	130	138	136	136	185	178	159	198	158	143	176	214	232	128	178	177	102	113	157
November.....	124	133	127	134	165	179	159	207	138	168	144	176	208	133	183	174	102	114	155
December.....	126	134	128	134	161	181	161	211	143	184	147	165	235	133	178	172	102	114	157
1918: Av. for year.	153	165	165	170	186	178	211	177	165	151	175	203	227	143	188	176	102	119	168
January.....	129	137	130	138	142	163	180	162	158	151	168	200	233	134	188	173	102	115	160
February.....	131	141	133	142	146	160	179	163	151	158	170	200	233	136	188	193	102	112	161
March.....	133	143	135	145	150	161	181	164	159	151	171	200	240	138	147	167	102	113	154
April.....	144	155	148	154	164	170	183	166	164	148	175	200	237	139	129	165	101	117	154
May.....	157	170	161	175	187	170	208	178	132	151	148	177	200	165	141	129	165	101	117
June.....	168	182	169	184	188	177	191	173	133	146	146	179	203	144	171	165	101	119	158
July.....	166	181	168	185	180	194	181	206	137	148	179	203	223	148	223	167	101	120	167
August.....	163	178	165	177	179	201	200	180	141	157	177	206	227	154	229	169	101	121	171
September.....	164	178	165	181	220	193	145	155	163	161	177	206	230	157	229	175	102	122	173

October.....	161	175	163	174	178	216	214	193	216	183	186	170	174	166	175	203	227	161	206	193	102	124	131
November.....	159	173	162	172	175	206	216	195	216	185	215	174	184	173	175	203	217	161	194	196	103	125	183
December.....	159	171	161	171	174	197	217	198	216	180	235	190	193	176	175	203	213	160	188	196	109	124	187
1919: Av. for year	164	174	164	169	167	201	205	199	234	193	182	177	193	174	179	218	213	174	224	205	145	129	186
January.....	162	175	165	175	181	193	217	199	211	188	218	184	201	173	175	200	207	159	188	196	117	127	185
February.....	162	174	165	174	181	180	203	193	203	186	147	149	185	174	175	200	200	164	182	195	123	126	172
March.....	165	177	169	178	183	184	203	191	211	186	140	174	183	166	175	206	197	154	171	183	126	129	175
April.....	172	182	175	184	187	197	212	197	223	202	143	185	190	169	175	218	200	154	182	193	129	128	182
May.....	173	187	178	186	181	205	210	203	240	204	154	177	191	167	175	227	207	154	194	193	136	128	185
June.....	170	181	171	176	174	202	212	205	254	200	155	165	192	169	177	227	210	159	224	193	143	129	184
July.....	171	183	169	173	168	220	215	211	266	197	164	164	195	169	179	227	217	168	282	198	155	130	190
August.....	166	177	164	166	160	223	214	212	206	196	174	167	197	174	180	224	220	178	294	202	160	130	192
September.....	161	170	158	158	150	219	206	205	228	194	183	172	195	176	180	221	223	190	253	200	164	130	188
October.....	157	165	155	153	145	211	196	195	228	189	209	186	192	180	180	221	220	199	224	207	159	131	189
November.....	155	162	153	151	143	200	189	188	231	184	235	197	195	181	182	224	220	202	229	227	164	131	192
December.....	154	161	153	152	143	181	186	186	221	184	261	201	196	188	182	253	220	203	253	264	164	127	197
1920:																							
January.....	159	166	159	158	152	178	186	187	215	197	240	194	196	187	195	245	220	208	318	324	165	132	201
February.....	160	167	159	157	152	180	186	188	204	210	199	199	196	188	198	245	217	210	353	342	165	131	200
March.....	161	161	157	157	150	186	186	190	192	215	161	196	194	187	200	242	217	211	400	340	165	135	200
April.....	170	179	169	166	157	206	191	199	191	224	153	199	194	183	200	245	217	214	535	307	165	135	211

1 No hens sold in this month by order of Food Administration.

TREND IN RETAIL COST OF 22 FOOD ARTICLES, COMBINED, FOR THE UNITED STATES, BY MONTHS, JANUARY, 1913, TO APRIL, 1920.

[Average cost for 1913=100.]



Comparison of Retail Food Costs in 51 Cities.

TABLE 4 shows for 39 cities the percentage of increase or decrease in the retail cost of 22 food articles⁶ in April, 1920, compared with the average cost in the year 1913, in April, 1919, and in March, 1920. For 11 other cities comparisons are given for the one-year and one-month periods. These cities have been scheduled by the Bureau at different dates since 1913. For Savannah, Ga., the comparison is given only for the month, as this city was first scheduled by the Bureau in 1920. These percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.⁷

TABLE 4.—PERCENTAGE CHANGES IN THE RETAIL COST OF 22 FOOD ARTICLES IN APRIL, 1920, COMPARED WITH THE COST IN MARCH, 1920, APRIL, 1919, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES.

City.	Percentage increase April, 1920, compared with—			City.	Percentage increase April, 1920, compared with—		
	1913	April, 1919.	March, 1920.		1913	April, 1919.	March, 1920.
Atlanta.....	106	14	3	Milwaukee.....	118	17	6
Baltimore.....	113	10	6	Minneapolis.....	121	19	7
Birmingham.....	114	12	6	Mobile.....		14	7
Boston.....	106	18	6	Newark.....	102	15	6
Bridgeport.....		14	3	New Haven.....	102	14	2
Buffalo.....	116	17	6	New Orleans.....	106	12	5
Butte.....		18	5	New York.....	109	16	5
Charleston.....	112	11	2	Norfolk.....		10	5
Chicago.....	119	22	6	Omaha.....	122	18	7
Cincinnati.....	114	16	7	Peoria.....		18	7
Cleveland.....	120	22	8	Philadelphia.....	108	14	6
Columbus.....		16	6	Pittsburgh.....	112	17	7
Dallas.....	103	13	3	Portland, Me.....		10	2
Denver.....	105	11	5	Portland, Oreg.....	93	14	3
Detroit.....	127	22	8	Providence.....	107	14	2
Fall River.....	102	15	1	Richmond.....	114	12	3
Houston.....		16	5	Rochester.....		15	3
Indianapolis.....	113	20	8	St. Louis.....	129	21	8
Jacksonville.....	94	11	3	St. Paul.....		17	5
Kansas City, Mo.....	118	19	7	Salt Lake City.....	89	12	3
Little Rock.....	105	15	7	San Francisco.....	93	16	3
Los Angeles.....	86	16	4	Savannah.....			5
Louisville.....	106	12	8	Scranton.....	110	16	4
Manchester.....	103	13	3	Seattle.....	97	14	4
Memphis.....	114	13	5	Springfield, Ill.....		21	5
				Washington, D. C.....	113	11	5

Retail Prices of Gas in the United States.¹

THE following table shows for 51 cities the net price, per 1,000 cubic feet, of gas used for household purposes. Prices are, in most cases, for manufactured gas, but prices for natural gas have also been quoted for those cities where it is in general use. For Los Angeles, prices are given for natural and manufactured gas, mixed. The prices shown do not include any extra charge for service.

⁶ For list of articles see note 2, p. 57.

⁷ The consumption figure used for each article in each city is given in the MONTHLY LABOR REVIEW of November, 1918, pp. 94 and 95.

¹ Retail prices of gas are secured annually and are published in the June issues of the MONTHLY LABOR REVIEW.

MONTHLY LABOR REVIEW.

NET PRICE, PER 1,000 CUBIC FEET, OF GAS FOR HOUSEHOLD USE ON APR. 15 OF EACH YEAR, 1913 TO 1920, BY CITIES.

Manufactured gas.

City.	Apr. 15, 1913.	Apr. 15, 1914.	Apr. 15, 1915.	Apr. 15, 1916.	Apr. 15, 1917.	Apr. 15, 1918.	Apr. 15, 1919.	Apr. 15, 1920.
Atlanta, Ga.	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00	\$1.15	\$1.15
Baltimore, Md.	.90	.80	.80	.75	.75	.75	.75	.75
Birmingham, Ala.	1.00	.95	.95	.95	.95	.95	.95	.95
Boston, Mass.	.82	.82	.80	.80	.80	.85	1.02	1.07
Bridgeport, Conn.	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.10
Buffalo, N. Y.	1.00	1.00	1.00	1.00	1.00	1.00	1.45	1.45
Butte, Mont.	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Charleston, S. C.	1.10	1.10	1.10	1.10	1.00	1.10	1.10	1.25
Chicago, Ill.	.80	.80	.80	.80	.80	.75	.91	.90
Cleveland, Ohio.	.80	.80	.80	.80	.80	.80	.80	.80
Denver, Colo.	.85	.80	.80	.80	.80	.85	.95	.95
Detroit, Mich.	.75	.75	.75	.75	.75	.75	.79	.79
Fall River, Mass.	.80	.80	.80	.80	.80	.95	.95	1.05
Houston, Tex.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09
Indianapolis, Ind.	.60	.55	.55	.55	.55	.55	.60	.60
Jacksonville, Fla.	1.20	1.20	1.15	1.15	1.15	1.25	1.25	1.50
Manchester, N. H.	1.10	1.10	1.00	1.00	1.00	1.00	1.10	1.10
Memphis, Tenn.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.10
Milwaukee, Wis.	.75	.75	.75	.75	.75	.75	.75	.75
Minneapolis, Minn.	.85	.80	.80	.77	.77	.77	.95	.95
Mobile, Ala.	1.10	1.10	1.10	1.10	1.10	1.10	1.35	1.35
Newark, N. J.	1.00	.90	.90	.90	.90	.97	.97	1.15
New Haven, Conn.	.90	.90	.90	.90	.90	1.00	1.10	1.10
New Orleans, La.	1.10	1.00	1.00	1.00	1.00	1.00	1.30	1.30
New York, N. Y.	.80	.80	.80	.80	.80	.80	.80	.80
Norfolk, Va.	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60
Omaha, Nebr.	1.15	1.15	1.15	1.00	1.00	1.15	1.15	1.15
Peoria, Ill.	.90	.90	.90	.90	.85	.85	.85	.85
Philadelphia, Pa.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Pittsburgh, Pa.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	(1)
Portland, Me.	1.10	1.00	1.00	1.00	1.00	1.00	1.40	1.40
Portland, Oreg.	.95	.95	.95	.95	.95	.95	.95	.95
Providence, R. I.	.85	.85	.85	.85	.85	1.00	1.30	1.30
Richmond, Va.	.90	.90	.90	.80	.80	.80	1.00	1.00
Rochester, N. Y.	.95	.95	.95	.95	.95	.95	.95	.95
St. Louis, Mo.	.80	.80	.80	.80	.75	.75	.75	.85
St. Paul, Minn.	.95	.90	.90	.85	.85	.85	.85	.85
Salt Lake City, Utah.	.90	.90	.90	.90	.90	.90	1.10	1.30
San Francisco, Calif.	.75	.85	.85	.85	.85	.85	.95	.95
Savannah, Ga.								1.25
Scranton, Pa.	1.08	1.08	1.08	1.08	1.08	1.15	1.30	1.30
Seattle, Wash.	1.00	1.00	1.00	1.00	1.00	1.25	1.25	1.50
Springfield, Ill.	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.10
Washington, D. C.	.93	.93	.93	.93	.80	.90	.95	.95

Natural gas.

Buffalo, N. Y.	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.30	\$0.35
Cincinnati, Ohio.	.30	.30	.30	.30	.30	.35	.35	.35
Cleveland, Ohio.	.30	.30	.30	.30	.30	.30	.35	.35
Columbus, Ohio.					.30	.30	.30	.30
Dallas, Tex.	.45	.45	.45	.45	.45	.45	.45	.45
Kansas City, Mo.	.27	.27	.27	.27	.30	.60	.80	.80
Little Rock, Ark.	.40	.40	.40	.40	.40	.40	.45	.45
Louisville, Ky.	.62	.62	.65	.65	.65	.65	.65	.65
Pittsburgh, Pa.	.28	.28	.28	.28	.28	.28	.35	.35

Manufactured and natural gas.

Los Angeles, Calif.			\$0.68	\$0.68	\$0.68	\$0.68	\$0.75	\$0.75
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¹ Sale of manufactured gas discontinued.

From the prices quoted on manufactured gas in 43 cities, average prices have been computed for the 43 cities combined and are shown for April 15 of each year from 1913 to 1920 in the next table. Relative prices have been computed by dividing the price in April of each year by the price in April, 1913.

As may be seen in the table, the price of manufactured gas has changed but little since 1913, being only 15 per cent higher in April, 1920, than in April, 1913, and until 1918 being less than in 1913.

AVERAGE¹ AND RELATIVE PRICES OF MANUFACTURED GAS FOR HOUSEHOLD USE, PER 1,000 CUBIC FEET, ON APR. 15 OF EACH YEAR, 1913 TO 1920, FOR 43 CITIES COMBINED.

[Average price in April, 1913=100.]

Year.	Average price.	Relative price.	Year.	Average price.	Relative price.
April, 1913.....	\$0.95	100	April, 1917.....	\$0.92	97
April, 1914.....	.94	99	April, 1918.....	.95	100
April, 1915.....	.94	99	April, 1919.....	1.03	108
April, 1916.....	.93	98	April, 1920.....	1.09	115

¹ Net price.

Index Numbers of Wholesale Prices in the United States.

LARGE increases again took place in the wholesale prices of many important commodities during the month of April, according to information collected in representative markets by the United States Bureau of Labor Statistics. The Bureau's weighted index number, which registered 253 in March, rose to 265 in April. This represents an advance of nearly $4\frac{3}{4}$ per cent.

The most notable examples of price increase were found in the group of fuel and lighting materials, the increase in this group as a whole being 11 per cent. Bituminous coal and coke were responsible in large measure for the results shown. Food followed next with an increase of $9\frac{3}{4}$ per cent, due largely to the recent sharp advance in sugar and potatoes. In the group of lumber and building materials prices continued steeply upward, with an increase of $5\frac{1}{4}$ per cent over March. The groups of farm products and chemicals each showed an increase of over 3 per cent, while smaller increases were recorded for metals and metal products and for house-furnishing goods.

An increase of nearly $3\frac{1}{2}$ per cent in April prices over those of March was found in the group of miscellaneous commodities, including such important articles as bran, mill-feed middlings, lubricating oil, newsprint and wrapping paper, and wood pulp. In only one group, that of cloths and clothing, was there a net decrease in prices from March to April. This decrease, which amounted to less than 1 per cent for the group, was due entirely to the decline in raw silk and leather.

The following table shows the more important price changes occurring between March and April, as measured by average prices for each month:

IMPORTANT ARTICLES INCREASING OR DECREASING IN AVERAGE PRICE IN APRIL,
AS COMPARED WITH MARCH, 1920, BY GROUPS OF COMMODITIES.

Increases.

Commodity.	Per cent.	Commodity.	Per cent.	Commodity.	Per cent.
<i>Farm products.</i>		<i>Food, etc.—Concluded.</i>		<i>Metals and metal products—Concluded.</i>	
Cotton:		Corn meal:		Pig iron—Concluded.	
New Orleans.....	2.1	Terre Haute.....	9.4	No. 2, foundry, Pitts-	
New York.....	2.4	Philadelphia.....	18.7	burgh.....	3.7
Barley, Chicago.....	9.1	Mutton, New York.....	28.2	Structural steel, Chicago..	6.1
Corn, Chicago.....	8.5	Dressed poultry:			
Oats, Chicago.....	11.3	Chicago.....	8.1		
Rye, Chicago.....	15.1	New York.....	6.8		
Wheat:		Sugar, raw, New York....	49.0	<i>Lumber and building materials.</i>	
No. 1 northern spring,		Potatoes, Chicago.....	29.1		
Chicago.....	13.9			Brick, Cincinnati.....	6.7
No. 2 red winter, Chi-		<i>Cloths and clothing.</i>		Cement, Portland, New	
cago.....	10.9	Print cloths, Boston.....	6.2	York.....	4.7
No. 2 hard winter, Kan-		Linen shoe thread, New		Lime, common, New	
sas City.....	9.6	York.....	5.5	York.....	5.8
No. 1 northern spring,				Lumber, New York:	
Minneapolis.....	9.1	<i>Fuel and lighting.</i>		Maple.....	11.1
Bluestem, Portland,				Yellow pine flooring....	15.1
Oreg.....	4.9	Alcohol, denatured, New		Turpentine, New York....	15.1
Timothy hay, Chicago....	21.0	York.....	12.6	<i>Chemicals and drugs.</i>	
Hops:		Coal, bituminous:		Acetic acid, New York....	32.0
New York.....	18.2	Mine run, Chicago.....	20.8	Muriatic acid, New York..	7.5
Pacifics, Portland,		Prepared sizes, Chicago..	21.3	Nitric acid, New York....	7.1
Oreg.....	19.0	Screenings, Chicago.....	11.7	Wood alcohol, New York..	12.8
Hops, Chicago.....	2.0	Mine run, Cincinnati....	34.2	Opium, New York.....	10.0
Sheep, Chicago:		Mine run, St. Louis.....	11.1	Caustic soda, New York..	11.7
Ewes.....	5.4	Coal, semibituminous:		Soda ash, New York.....	19.4
Lambs.....	4.4	New River, Cincinnati..	36.1	<i>House-furnishing goods.</i>	
Wethers.....	6.7	Pocahontas, Norfolk....	39.9	Oak rocking chairs, Chi-	
		Coke, furnace, Connells-		cago.....	13.0
<i>Food, etc.</i>		ville.....	75.0	<i>Miscellaneous.</i>	
Butter, creamery, extra:		Petroleum:		Bran, Minneapolis.....	7.7
New York.....	7.5	Crude, California wells..	8.5	Mill-feed middlings,	
Philadelphia.....	4.5	Refined 110°, New York..	3.3	Minneapolis.....	5.9
Rye flour, Minneapolis...	17.1	Refined 150°, New York..	4.0	Wrapping paper, New	
Wheat flour, patent:		<i>Metals and metal products.</i>		York.....	11.1
Kansas City.....	4.0	Pig iron:		Manila rope, New York....	5.4
Minneapolis.....	8.5	Basic, valley furnace....	2.2	Wood pulp, New York....	49.5
St. Louis.....	4.5				
Toledo.....	9.5				

Decreases.

<i>Farm products.</i>		<i>Food, etc.—Continued.</i>		<i>Food, etc.—Concluded.</i>	
Flaxseed, Minneapolis....	6.9	Eggs, fresh, firsts—Con.		Milk, fresh:	
Cattle, Chicago.....	4.3	Cincinnati.....	10.3	Chicago.....	4.6
Tobacco, Louisville.....	5.4	New York.....	9.3	New York.....	22.3
		Philadelphia.....	8.9	Oleo oil, Chicago.....	7.7
<i>Food, etc.</i>		Herring, pickled, New			
Eggs, fresh, firsts:		York.....	18.4	<i>Cloths and clothing.</i>	
Boston.....	4.9	Lemons, Chicago.....	19.1	Leather, side, Boston....	14.7
Chicago.....	8.0	Raisins, New York.....	5.0	Raw silk, New York.....	13.5
		Lard, New York.....	4.6		

Measured by changes in the index numbers for the 12 months from April, 1919, to April, 1920, farm products increased 4.7 per cent in price, food 28 per cent, and cloths and clothing 62.7 per cent. During the same time fuel and lighting increased 27½ per cent, metals and metal products over 28 per cent, and lumber and building materials 110½ per cent in price. Chemicals and drugs increased 19 per cent, house-furnishing goods 52½ per cent, and miscellaneous commodities over 10 per cent in average price. All commodities, considered in the aggregate, increased 30½ per cent in price.

INDEX NUMBERS OF WHOLESALE PRICES IN SPECIFIED YEARS AND MONTHS, 1913 TO APRIL, 1920, BY GROUPS OF COMMODITIES.

[1913=100.]

Year and month.	Farm products.	Food, etc.	Cloths and clothing.	Fuel and lighting.	Metals and metal products.	Lumber and building materials.	Chemicals and drugs.	House furnishing goods.	Miscellaneous.	All commodities.
1913.....	100	100	100	100	100	100	100	100	100	100
January.....	97	99	100	103	107	100	101	100	100	100
April.....	97	96	100	98	102	101	101	100	98	98
July.....	101	102	100	99	98	101	99	100	101	100
October.....	103	102	100	100	99	98	100	100	100	101
1914.....	103	103	98	96	87	97	101	99	99	100
January.....	101	102	98	99	92	98	100	99	99	100
April.....	103	95	99	98	91	99	100	99	101	98
July.....	104	104	99	95	85	97	99	99	97	100
October.....	103	107	97	93	83	96	105	99	96	99
1915.....	105	104	100	93	97	94	114	99	99	101
January.....	102	106	96	93	83	94	103	99	100	99
April.....	107	105	99	89	91	94	102	99	99	100
July.....	108	104	99	90	102	93	108	99	98	101
October.....	105	103	103	96	100	93	124	99	99	101
1916.....	122	126	128	119	148	101	159	115	120	124
January.....	108	113	110	105	126	99	150	105	107	110
April.....	114	117	119	108	147	101	172	108	110	117
July.....	118	121	126	108	145	99	156	121	120	119
October.....	136	140	138	133	151	101	150	124	132	134
1917.....	189	176	181	175	208	124	198	144	155	176
January.....	148	150	161	176	183	106	159	132	138	151
April.....	181	182	169	184	208	114	170	139	149	172
July.....	199	181	187	192	257	132	198	152	153	186
October.....	208	183	193	146	182	134	252	152	163	181
1918.....	220	189	239	163	181	151	221	196	193	196
January.....	207	187	211	157	174	136	232	161	178	185
February.....	208	186	216	167	176	138	232	161	181	186
March.....	212	177	223	158	176	144	232	165	184	187
April.....	217	178	232	157	177	146	229	172	191	190
May.....	214	177	237	160	178	148	223	173	194	190
June.....	217	179	245	159	178	150	219	198	196	193
July.....	224	184	249	166	184	154	216	199	190	198
August.....	230	191	252	166	185	157	222	221	191	202
September.....	237	199	255	167	184	159	220	225	194	207
October.....	224	201	257	167	187	158	218	226	196	204
November.....	221	206	256	171	188	164	215	226	203	206
December.....	222	210	250	171	184	164	195	227	204	206
1919.....	234	210	261	173	161	192	179	236	217	212
January.....	222	207	234	170	172	161	191	218	212	203
February.....	218	196	223	169	168	163	185	218	208	197
March.....	228	203	216	168	162	165	183	218	217	201
April.....	235	211	217	167	152	162	178	217	216	203
May.....	240	214	228	167	152	164	179	217	213	207
June.....	231	204	258	170	154	175	174	233	212	207
July.....	246	216	282	171	158	186	171	245	221	218
August.....	243	227	304	175	165	208	172	259	225	226
September.....	226	211	306	181	160	227	173	262	217	220
October.....	230	211	313	181	161	231	174	264	220	223
November.....	240	219	325	179	164	236	176	299	220	230
December.....	244	234	335	181	169	253	179	303	220	238
1920:										
January.....	246	253	350	184	177	268	189	324	227	248
February.....	237	244	356	187	189	300	197	329	227	249
March.....	239	246	356	192	192	324	205	329	230	253
April ¹	246	270	353	213	195	341	212	331	238	265

¹ Preliminary.

Price Changes, Wholesale and Retail, of Important Food Articles in Selected Cities.

CONTINUING information published in previous issues of the MONTHLY LABOR REVIEW, the trend of wholesale and retail prices since 1913 for a number of important food products is shown herewith. Exact comparison of wholesale with retail prices is not attempted in the tables. Some food products—fresh meats, for example—are not sold by the retailer in the same form in which they leave the wholesaler, hence strictly comparable prices are not obtainable. It was found impracticable also to obtain both wholesale and retail prices for the same date, the retail prices being those prevailing on the 15th of the month, while the wholesale prices are for a variable date, usually several days prior to the 15th. The figures in the table are therefore to be considered as merely indicative of price variations in the retail as compared with the wholesale markets.

To assist in comparing the fluctuations at wholesale and at retail, the differential between the two series of quotations at successive dates is given. It should not be assumed, however, that this differential in any case represents the margin of profit to the retailer, since, in addition to a possible difference of grade between the articles shown at wholesale and retail, the various items of handling cost to both the wholesaler and retailer are included in the figure.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES.

[The initials W=wholesale, R=retail. The wholesale price is the mean of the high and low quotation on the date selected, as published in leading trade journals. The retail price is the average of prices reported to the Bureau of Labor Statistics by dealers.]

Article and city.	Unit.	1913: Average for year.	July—					1919			1920			
			1914	1915	1916	1917	1918	Jan.	July.	Oct.	Jan.	Feb.	Mar.	Apr.
Beef, Chicago:														
Steer loin ends (hip).....W.	Lb.	Cts. 16.8	Cts. 17.5	Cts. 16.0	Cts. 20.5	Cts. 19.0	Cts. 34.0	Cts. 32.0	Cts. 27.0	Cts. 33.0	Cts. 32.0	Cts. 30.0	Cts. 32.0	Cts. 32.0
Sirloin steak.....R.	Lb.	23.2	26.0	25.8	28.1	30.2	37.7	37.5	39.3	36.6	37.2	37.2	39.4	40.9
Price differential.....		6.4	8.5	9.8	7.6	11.2	3.7	5.5	12.3	3.6	5.2	7.2	7.4	8.9
Beef, Chicago:														
Steer rounds, No. 2.....W.	Lb.	13.1	14.5	14.3	14.5	17.0	25.0	22.0	22.0	21.0	20.0	20.0	19.0	19.0
Round steak.....R.	Lb.	20.2	23.3	22.8	24.1	26.6	35.0	34.0	35.5	32.5	32.0	31.8	33.7	34.6
Price differential.....		7.1	8.8	8.5	9.6	9.6	10.0	12.0	13.5	11.5	12.0	11.8	14.7	15.6
Beef, Chicago:														
Steer ribs, No. 2.....W.	Lb.	15.7	16.5	14.5	17.5	20.0	28.0	30.0	24.0	28.0	35.0	30.0	25.0	27.0
Rib roast.....R.	Lb.	19.5	21.2	21.3	22.9	24.6	31.8	31.3	31.9	28.9	30.1	30.4	33.1	34.0
Price differential.....		3.8	4.7	6.8	5.4	4.6	3.8		7.9			4	8.1	7.0
Beef, New York:														
No. 2 loins, city.....W.	Lb.	15.8	18.3	17.0	20.0	19.0	28.0	37.0	28.5	37.0	37.0	37.0	34.0	34.0
Sirloin steak.....R.	Lb.	25.9	27.4	28.2	29.4	33.7	43.9	44.8	44.4	42.6	43.3	43.4	42.4	45.8
Price differential.....		10.1	9.1	11.2	9.4	14.7	15.9	7.8	15.9	5.6	6.3	6.4	8.4	11.8
Beef, New York:														
No. 2 rounds, city.....W.	Lb.	12.1	13.5	13.5	14.5	17.5	28.0	25.0	22.0	22.0	21.0	20.0	19.0	20.5
Round steak.....R.	Lb.	24.9	27.0	27.1	28.9	33.7	46.3	47.3	46.2	44.5	44.6	44.4	43.1	46.4
Price differential.....		12.8	13.5	13.6	14.4	16.2	18.3	22.3	24.2	22.5	23.6	24.4	24.1	25.9
Beef, New York:														
No. 2 ribs, city.....W.	Lb.	15.1	16.5	16.0	18.0	19.0	28.0	35.0	27.5	30.0	31.0	29.0	27.0	27.0
Rib roast.....R.	Lb.	21.8	22.5	22.7	24.3	27.9	37.5	40.9	34.6	37.2	38.4	38.4	38.0	40.6
Price differential.....		6.7	6.0	6.7	6.3	8.9	9.5	5.9	11.1	7.2	7.4	9.4	11.0	13.6
Pork, Chicago:														
Loins.....W.	Lb.	14.9	16.5	15.0	16.5	25.0	29.0	27.0	37.0	35.0	25.0	29.0	30.0	32.0
Chops.....R.	Lb.	19.0	20.4	20.1	21.7	29.2	35.5	35.2	41.7	41.0	32.4	35.7	38.1	43.1
Price differential.....		4.1	3.9	5.1	5.2	4.2	6.5	8.2	4.7	6.0	7.4	6.7	8.1	11.1
Pork, New York:														
Loins, western.....W.	Lb.	15.2	16.3	15.3	16.5	23.5	30.5	33.0	37.0	39.0	29.0	26.0	28.0	29.0
Chops.....R.	Lb.	21.7	23.0	21.7	23.9	32.6	40.6	43.5	47.5	45.7	39.0	40.6	41.2	44.8
Price differential.....		6.5	6.7	6.4	7.4	9.1	10.1	10.5	10.5	6.7	10.9	14.6	13.2	15.8
Bacon, Chicago:														
Short clear sides.....W.	Lb.	12.7	13.9	11.3	15.9	24.7	27.4	29.4	33.1	23.3	21.6	22.6	20.9	21.6
Sliced.....R.	Lb.	20.4	31.8	31.5	32.8	43.9	54.7	61.6	61.5	54.6	53.1	53.9	54.6	56.4
Price differential.....		16.7	17.9	20.2	16.9	19.2	27.3	32.2	28.4	31.3	31.5	31.3	33.7	34.8
Ham, Chicago:														
Smoked.....W.	Lb.	16.6	17.5	16.3	19.0	24.3	30.1	35.3	38.3	29.3	28.9	30.3	30.5	32.5
Smoked, sliced.....R.	Lb.	28.6	33.8	32.8	34.9	41.4	49.1	55.3	58.8	54.0	51.8	51.9	53.1	55.6
Price differential.....		10.0	16.3	16.5	15.9	17.1	19.0	20.0	20.5	26.7	22.9	21.6	22.6	23.1
Lard, New York:														
Prime, contract.....W.	Lb.	11.0	10.4	8.0	13.3	20.1	26.2	24.2	35.8	29.0	24.5	20.8	21.1	19.3
Pure, tub.....R.	Lb.	16.0	15.6	15.1	16.8	27.4	32.2	33.1	42.5	35.7	33.8	32.9	31.2	30.4
Price differential.....		5.0	5.2	7.1	3.5	7.3	6.0	8.9	6.7	6.7	9.3	12.1	10.1	11.1
Lamb, Chicago:														
Dressed, round.....W.	Lb.	14.9	17.0	19.0	19.0	26.0	31.0	28.0	29.0	24.0	29.0	34.0	31.0	33.0
Leg of, yearling.....R.	Lb.	19.8	21.9	20.8	23.1	28.7	35.7	34.2	36.2	33.1	37.0	39.3	40.4	41.7
Price differential.....		4.9	4.9	1.8	4.1	2.7	4.7	6.2	7.2	9.1	8.0	5.3	9.4	8.7
Poultry, New York:														
Dressed fowls.....W.	Lb.	18.2	18.8	17.5	21.5	24.8	36.0	35.5	34.5	37.8	35.3	38.8	38.8	39.0
Dressed hens.....R.	Lb.	21.4	22.0	21.9	25.6	28.7	41.0	40.8	41.5	40.5	40.3	43.5	43.5	45.0
Price differential.....		3.2	3.2	4.4	4.1	3.9	5.0	5.3	7.0	2.7	5.0	4.7	4.7	6.0
Butter, Chicago:														
Creamery, extra.....W.	Lb.	31.0	28.5	26.5	27.5	37.5	42.5	66.0	52.0	63.5	62.0	59.0	65.5	60.0
Creamery, extra.....R.	Lb.	36.2	31.2	32.2	33.5	43.3	48.0	71.3	57.1	67.8	69.0	66.4	73.9	71.0
Price differential.....		5.2	4.7	5.7	6.0	5.7	5.5	5.3	5.1	4.3	7.0	7.4	8.4	11.0
Butter, New York:														
Creamery, extra.....W.	Lb.	33.2	28.0	27.0	28.5	39.5	44.4	67.0	51.0	66.8	63.8	67.0	65.8	75.0
Creamery, extra.....R.	Lb.	38.2	32.8	33.6	34.6	45.3	51.4	75.5	61.3	72.4	75.2	75.6	75.1	80.0
Price differential.....		5.9	4.8	6.6	6.1	5.8	7.0	8.5	10.3	5.6	11.4	8.6	9.3	5.0
Butter, San Francisco:														
Creamery, extra.....W.	Lb.	31.7	24.5	26.5	25.5	38.5	50.0	64.5	56.5	66.0	61.0	63.5	63.0	58.5
Creamery, extra.....R.	Lb.	38.8	32.9	33.8	33.3	45.5	56.6	72.3	64.7	73.5	70.9	71.9	69.6	64.2
Price differential.....		7.1	8.4	7.3	7.8	7.0	6.6	7.8	8.2	7.5	9.9	8.4	6.6	5.7
Cheese, Chicago:														
Whole milk.....W.	Lb.	14.2	13.3	14.5	14.5	21.6	22.7	36.3	30.9	27.4	30.4	27.6	28.3	27.9
Full cream.....R.	Lb.			22.9	24.2	33.9	34.5	43.0	44.1	44.4	44.9	44.3	44.9	44.3
Price differential.....				8.4	9.7	12.3	11.8	7.6	13.2	17.0	14.5	16.7	16.6	16.4

¹ Price is for different quality of beef from that quoted at wholesale.

WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN SELECTED CITIES—Concluded.

Article and city.	Unit.	1913: Average for year.	July—					1919			1920			
			1914	1915	1916	1917	1918	Jan.	July.	Oct.	Jan.	Feb.	Mar.	Apr.
Cheese, New York:														
Whole milk, State..... W.	Lb.	Cts. 15.4	Cts. 14.4	14.6	15.1	23.8	23.9	36.8	31.5	30.3	31.4	30.0	28.5	28.5
Full cream..... R.	Lb.	.....	.....	22.9	22.8	32.8	33.2	42.7	42.8	42.3	43.3	43.4	42.9	42.7
Price differential.....		.....	.....	8.3	7.7	9.0	9.3	5.9	11.3	12.0	11.9	13.4	14.4	14.2
Cheese, San Francisco:														
Fancy..... W.	Lb.	15.9	12.5	11.5	13.5	20.0	26.0	33.5	32.0	33.0	32.5	31.0	33.5	25.5
Full cream..... R.	Lb.	.....	.....	20.0	22.9	29.7	32.3	41.9	41.2	44.7	43.2	42.1	42.0	40.6
Price differential.....		.....	.....	8.5	9.4	9.7	6.3	8.4	9.2	11.7	10.7	11.1	8.5	15.1
Milk, Chicago:														
Fresh..... W.	Qt.	3.8	3.6	3.7	3.6	4.7	5.3	8.4	6.8	8.2	8.1	7.6	6.7	6.4
Fresh, bottled ² R.	Qt.	8.0	8.0	8.0	8.1	10.0	12.0	14.0	14.0	15.0	15.0	15.0	14.0	14.0
Price differential.....		4.2	4.4	4.3	4.5	5.3	6.7	5.6	7.2	6.8	6.9	7.4	7.3	7.6
Milk, New York:														
Fresh..... W.	Qt.	3.5	3.0	3.0	3.1	5.0	5.4	9.2	7.1	7.3	8.5	8.1	7.9	6.1
Fresh, bottled ² R.	Qt.	9.0	9.0	9.0	9.0	11.4	12.7	16.0	16.0	16.0	18.0	16.7	16.7	15.0
Price differential.....		5.5	6.0	6.0	5.9	6.4	7.3	6.8	8.9	8.7	9.5	8.6	8.8	8.9
Milk, San Francisco:														
Fresh..... W.	Qt.	3.8	3.9	3.8	3.8	4.3	5.9	7.4	7.4	7.4	8.4	8.4	8.4	8.4
Fresh, bottled..... R.	Qt.	10.0	10.0	10.0	10.0	10.0	12.1	14.0	14.0	14.2	15.8	15.8	15.8	15.8
Price differential.....		6.1	6.1	6.2	6.2	5.7	6.2	6.6	6.6	6.8	7.4	7.4	7.4	7.4
Eggs, Chicago:														
Fresh, firsts..... W.	Doz.	22.6	18.8	16.8	21.8	31.0	36.5	58.8	42.0	56.8	68.5	50.0	45.1	40.0
Strictly fresh..... R.	Doz.	29.2	28.1	24.8	29.6	40.6	45.7	69.5	53.2	65.6	77.8	62.6	55.0	51.0
Price differential.....		6.6	7.3	8.0	7.8	9.6	9.2	10.7	11.2	8.8	9.3	12.6	9.9	11.0
Eggs, New York:														
Fresh, firsts..... W.	Doz.	24.9	21.5	20.0	24.1	35.0	40.0	61.3	44.5	61.0	77.5	57.5	45.5	46.3
Strictly fresh..... R.	Doz.	39.7	35.3	32.6	37.2	47.7	57.3	78.1	66.4	80.0	95.8	77.8	64.0	62.9
Price differential.....		14.8	13.8	12.6	13.1	12.7	17.3	16.8	21.9	19.0	18.3	20.3	18.5	16.6
Eggs, San Francisco:														
Fresh..... W.	Doz.	26.8	23.0	22.0	24.0	32.0	44.0	53.0	45.0	59.5	54.5	45.0	36.0	38.5
Strictly fresh..... R.	Doz.	37.3	33.8	31.0	33.3	39.2	51.4	65.7	56.6	79.1	68.9	53.1	47.4	47.3
Price differential.....		10.5	10.8	9.0	9.3	7.2	7.4	12.7	11.6	9.6	14.4	8.1	11.4	8.8
Meal, corn, Chicago:														
Fine..... W.	Lb.	1.4	1.6	.....	1.0	4.5	5.4	3.6	4.6	3.6	3.7	3.4	3.7	4.0
Fine..... R.	Lb.	2.9	2.8	3.1	3.1	5.8	6.8	5.8	6.1	6.7	6.6	6.7	6.9	7.1
Price differential.....		1.5	1.2	.....	1.2	1.3	1.4	2.2	1.5	3.1	2.9	3.3	3.2	3.1
Beans, New York:														
Medium, choice..... W.	Lb.	4.0	4.0	5.8	9.8	15.4	11.9	9.9	7.5	7.9	7.9	8.0	7.9	7.5
Navy, white..... R.	Lb.	.....	.....	8.1	11.3	18.8	17.5	15.3	12.2	12.3	12.5	12.5	12.3	12.4
Price differential.....		.....	.....	2.3	1.5	3.4	5.6	5.4	4.7	4.4	4.6	4.5	4.4	4.9
Potatoes, Chicago:														
White ³ W.	Lb.	1.0	2.4	.7	1.6	4.4	1.5	1.9	1.4	2.2	4.3	4.3	5.5	7.0
White..... R.	Lb.	1.5	2.7	1.2	2.3	5.0	3.7	2.7	5.0	3.4	5.2	5.8	6.6	8.8
Price differential.....		.5	.3	.5	.7	.6	2.2	.8	3.6	1.2	.9	1.5	1.1	1.8
Rice, New Orleans:														
Head..... W.	Lb.	5.0	5.4	4.9	4.6	7.1	9.3	9.1	10.5	12.4	12.6	12.8	12.5	12.3
Head..... R.	Lb.	.....	.....	7.5	7.4	10.1	11.9	12.0	14.2	14.8	16.0	16.1	16.2	16.4
Price differential.....		.....	.....	2.6	2.8	3.0	2.6	2.9	3.7	2.4	3.4	3.3	3.7	4.1
Sugar, New York:														
Granulated..... W.	Lb.	4.3	4.2	5.9	7.5	7.4	7.4	8.8	8.8	8.8	15.7	14.7	13.7	18.1
Granulated..... R.	Lb.	4.9	4.6	6.3	7.9	8.4	8.8	10.1	10.0	10.8	17.3	17.9	17.3	19.1
Price differential.....		.6	.4	.4	.4	1.0	1.4	1.3	1.2	2.0	1.6	3.2	3.6	1.0

² Delivered.³ Good to choice.

RELATIVE WHOLESALE AND RETAIL PRICES OF IMPORTANT FOOD ARTICLES IN
SELECTED CITIES.

[Average for 1913=100.]

Article and city.	Av- erage for 1913.	July—						1919			1920			
		1914	1915	1916	1917	1918		Jan.	July.	Oct.	Jan.	Feb.	Mar.	Apr.
Beef, Chicago:														
Steer loin ends (hip) . . . W . . .	100	104	95	122	113	202	190	161	196	190	179	190	190	190
Sirloin steak . . . R . . .	100	112	111	121	130	163	162	169	158	160	160	160	170	176
Beef, Chicago:														
Steer rounds, No. 2 . . . W . . .	100	111	109	111	130	191	168	168	160	153	153	145	145	145
Round steak . . . R . . .	100	115	113	119	132	173	168	176	161	158	157	167	167	171
Beef, Chicago:														
Steer ribs, No. 2 . . . W . . .	100	105	92	111	127	178	191	153	178	223	191	159	172	172
Rib roast . . . R . . .	100	109	109	117	126	163	159	164	148	154	156	170	174	174
Beef, New York:														
No. 2 loins, city . . . W . . .	100	116	108	127	120	177	234	180	234	234	234	215	215	215
Sirloin steak . . . R . . .	100	106	109	114	130	170	173	171	164	167	168	164	177	177
Beef, New York:														
No. 2 rounds, city . . . W . . .	100	112	112	120	145	231	207	182	182	174	165	157	169	169
Round steak . . . R . . .	100	108	109	116	135	186	190	186	179	179	178	173	186	186
Beef, New York:														
No. 2 ribs, city . . . W . . .	100	109	106	119	126	185	232	182	199	205	192	179	179	179
Rib roast . . . R . . .	100	103	104	111	128	172	188	177	171	176	176	174	186	186
Pork, Chicago:														
Loins . . . W . . .	100	111	101	111	168	195	181	248	235	168	195	201	215	215
Chops . . . R . . .	100	107	106	114	154	187	185	219	216	171	188	201	227	227
Pork, New York:														
Loins, western . . . W . . .	100	107	101	109	155	201	217	243	257	191	171	184	191	191
Chops . . . R . . .	100	106	100	110	150	187	200	219	211	184	187	190	206	206
Bacon, Chicago:														
Short clear sides . . . W . . .	100	109	89	125	194	216	232	261	183	170	178	165	170	170
Sliced . . . R . . .	100	108	107	112	149	186	210	209	186	181	183	186	192	192
Ham, Chicago:														
Smoked . . . W . . .	100	105	98	114	146	181	213	231	177	174	183	184	196	196
Smoked, sliced . . . R . . .	100	127	123	131	156	185	208	221	203	195	195	200	209	209
Lard, New York:														
Prime, contract . . . W . . .	100	95	73	121	183	238	220	325	264	223	189	192	175	175
Pure, tub . . . R . . .	100	98	94	105	171	201	207	266	223	211	206	195	190	190
Lamb, Chicago:														
Dressed, round . . . W . . .	100	114	128	128	174	208	188	195	161	195	228	208	221	221
Leg of, yearling . . . R . . .	100	111	105	117	145	180	173	183	167	187	198	204	211	211
Poultry, New York:														
Dressed fowls . . . W . . .	100	103	96	118	136	198	195	190	208	194	213	213	214	214
Dressed hens . . . R . . .	100	103	103	120	134	192	191	194	189	188	203	203	210	210
Butter, Chicago:														
Creamery, extra . . . W . . .	100	85	85	89	121	137	213	168	205	200	190	211	194	194
Creamery, extra . . . R . . .	100	86	89	93	119	133	197	158	187	191	183	204	196	196
Butter, New York:														
Creamery, extra . . . W . . .	100	87	84	88	122	137	207	158	207	198	207	204	232	232
Creamery, extra . . . R . . .	100	96	88	91	119	135	198	160	190	197	198	197	209	209
Butter, San Francisco:														
Creamery, extra . . . W . . .	100	77	84	80	121	158	203	178	208	192	200	199	185	185
Creamery, extra . . . R . . .	100	85	87	86	117	146	186	167	189	183	185	179	165	165
Milk, Chicago:														
Fresh . . . W . . .	100	95	97	95	124	139	221	179	216	213	200	176	168	168
Fresh, bottled, delivered . R . . .	100	100	100	101	125	150	175	175	188	188	188	175	175	175
Milk, New York:														
Fresh . . . W . . .	100	86	86	89	143	154	263	203	209	243	231	226	174	174
Fresh, bottled, delivered . R . . .	100	100	100	100	127	141	178	178	178	200	186	186	167	167
Milk, San Francisco:														
Fresh . . . W . . .	100	100	97	97	110	151	190	190	190	215	215	215	215	215
Fresh, bottled . . . R . . .	100	100	100	100	100	121	140	140	142	158	158	158	158	158
Eggs, Chicago:														
Fresh, firsts . . . W . . .	100	83	74	96	137	162	260	186	251	303	221	200	177	177
Strictly fresh . . . R . . .	100	89	85	101	139	137	238	182	225	266	214	188	175	175
Eggs, New York:														
Fresh, firsts . . . W . . .	100	86	80	97	141	161	246	179	245	311	231	183	186	186
Strictly fresh . . . R . . .	100	89	82	94	120	144	197	167	202	241	196	161	158	158
Eggs, San Francisco:														
Fresh . . . W . . .	100	86	82	90	119	164	198	168	222	203	168	134	144	144
Strictly fresh . . . R . . .	100	91	83	89	105	138	176	152	212	185	142	127	127	127
Meal, corn, Chicago:														
Fine . . . W . . .	100	114	107	136	321	386	257	329	257	264	243	264	286	286
Fine . . . R . . .	100	97	107	107	200	234	200	210	231	228	231	238	245	245
Potatoes, Chicago:														
White, good to choice . . . W . . .	100	237	66	160	429	150	190	140	220	430	430	550	700	700
White . . . R . . .	100	182	78	151	331	247	180	333	227	347	387	440	587	587
Sugar, New York:														
Granulated . . . W . . .	100	98	137	174	172	172	205	205	205	365	342	319	421	421
Granulated . . . R . . .	100	94	129	161	171	180	206	204	220	353	365	353	390	390

Wholesale Prices in the United States and Foreign Countries, 1913 to March, 1920.

IN THE following table the more important index numbers of wholesale prices in the United States and several foreign countries, as compiled by recognized authorities, have been reduced to a common base in order that the trend of prices in the several countries may be directly compared. The results here shown have been obtained by merely shifting the base for each series of index numbers to the year 1913; i. e., by dividing the index for 1913 on the original base into the index for each year or month on that base. These results are therefore to be regarded only as approximations of the correct index numbers in the case of series constructed by averaging the relative prices of individual commodities.¹ This applies to the index numbers of the Department of Labor of Canada and the *Statistique Générale* of France. The index numbers of the United States Bureau of Labor Statistics, the British Board of Trade, and the Bureau of Census and Statistics of Australia are built on aggregates of actual money prices, or relatives made from such aggregates of actual prices, and therefore can readily be shifted to any desired base. The validity of the comparison is also affected by the wide difference in the number of commodities included.

¹ For a discussion of index numbers constructed according to this method, see Bulletin No. 181 of the Bureau of Labor Statistics, pp. 245-252.

WHOLESALE PRICES IN THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES.

[Index numbers expressed as percentages of the index number for 1913. See text explanation.]

Year and month.	United States: Bureau of Labor Statistics; 328 commodities (variable).	Canada: Department of Labor; 272 commodities (variable).	United Kingdom: Board of Trade; 47 commodities.	France: Statistique Générale; 45 commodities.	Sweden: Svensk Handelstidning; number of commodities not stated.	Australia: Bureau of Census and Statistics; 92 commodities.
1913.....	100	100	100	100	100	100
1914.....	100	100	101	102	116	106
1915.....	101	110	124	140	145	147
1916.....	124	134	160	188	185	138
1917.....	176	174	209	262	244	153
1918.....	196	205	230	339	339	178
1919.....	212	216	254	356	331	.....
1914.						
January.....	100	101	.....	100	.....	1100
April.....	98	101	.....	100	.....	1102
July.....	100	99	.....	101	.....	1109
October.....	99	102	.....	107	.....	1113
1915.						
January.....	99	103	.....	124	.....	1127
April.....	100	108	.....	135	.....	1153
July.....	101	111	.....	142	.....	1167
October.....	101	112	.....	153	.....	1142
1916.						
January.....	110	127	.....	179	.....	1138
April.....	117	132	.....	190	.....	1137
July.....	119	132	.....	186	.....	1138
October.....	134	138	.....	198	.....	1139
1917.						
January.....	151	154	.....	215	.....	1140
April.....	172	169	.....	248	.....	1146
July.....	186	179	.....	268	.....	1158
October.....	181	179	.....	284	.....	1166
1918.						
January.....	185	190	.....	313	.....	1173
February.....	186	194	.....	319	.....	.....
March.....	187	199	.....	327	.....	.....
April.....	190	199	.....	333	.....	1178
May.....	190	204	.....	335	.....	.....
June.....	193	207	.....	329	.....	.....
July.....	198	210	.....	337	.....	1180
August.....	202	210	.....	350	.....	.....
September.....	207	211	.....	355	.....	.....
October.....	204	214	247	360	370	1181
November.....	206	215	246	358	367	.....
December.....	206	213	258	353	372	.....
1919.						
January.....	203	211	248	348	369	1177
February.....	197	206	249	340	358	.....
March.....	201	205	254	337	354	.....
April.....	203	206	252	332	339	.....
May.....	207	210	236	325	330	.....
June.....	207	210	238	330	324	.....
July.....	218	217	242	349	320	.....
August.....	226	222	257	347	321	.....
September.....	220	223	264	360	319	.....
October.....	223	221	274	382	307	.....
November.....	230	227	289	405	308	.....
December.....	238	238	297	423	317	.....
1920.						
January.....	248	250	306	487	319	.....
February.....	249	254	316	522	.....	.....
March.....	253	258	.....	554	.....	.....

¹ Quarter beginning in specified month.

CHANGES IN COST OF LIVING IN 13 INDUSTRIAL CITIES FROM DECEMBER, 1917, TO DECEMBER, 1919—Concluded.

Item of expenditure.	Memphis, Tenn.			Minneapolis, Minn.		
	Per cent of total expenditure.	Per cent of increase from December, 1917, to December—		Per cent of total expenditure.	Per cent of increase from December, 1917, to December—	
		1918	1919		1918	1919
Food.....	36.2	20.33	28.43	35.4	17.71	34.10
Clothing:						
Males.....		32.91	64.62		30.62	66.57
Females.....		25.18	66.90		35.43	67.45
All clothing.....	16.3	27.72	66.16	15.5	33.49	66.98
Housing.....	13.5	1.03	23.14	16.8	1.10	7.97
Fuel and light.....	5.1	26.80	34.14	6.8	14.71	22.42
Furniture and furnishings.....	4.5	25.37	53.15	4.8	18.08	45.57
Miscellaneous.....	24.4	16.13	28.31	20.5	12.27	25.43
Total.....	100.0	18.33	35.23	100.0	15.80	32.71
	New Orleans, La.			Pittsburgh, Pa.		
Food.....	42.6	16.56	21.13	40.2	18.77	25.14
Clothing:						
Males.....		44.39	91.78		41.30	84.10
Females.....		31.43	77.06		33.00	82.40
All clothing.....	15.0	36.75	83.16	17.8	35.92	82.84
Housing.....	12.0	(2)	10.79	14.5	7.57	15.53
Fuel and light.....	4.8	19.70	24.70	3.2	9.17	9.83
Furniture and furnishings.....	3.9	23.75	57.65	5.4	26.26	63.06
Miscellaneous.....	21.8	15.85	35.14	18.9	16.25	28.25
Total.....	100.0	17.90	33.86	100.0	19.82	36.17
	Richmond, Va.			St. Louis, Mo.		
Food.....	41.6	20.54	23.12	38.5	18.00	26.19
Clothing:						
Males.....		43.39	84.96		29.94	64.63
Females.....		27.19	73.65		34.93	89.66
All clothing.....	15.9	33.80	78.57	15.0	32.37	78.09
Housing.....	10.5	1.00	9.83	13.4	2.74	16.79
Fuel and light.....	5.6	11.76	18.70	4.9	4.84	8.23
Furniture and furnishings.....	4.8	26.33	55.88	5.6	21.77	52.91
Miscellaneous.....	21.5	9.04	23.95	22.6	14.48	30.28
Total.....	100.0	17.88	32.02	100.0	16.69	34.24
	Scranton, Pa.					
Food.....	42.6	21.32	26.90			
Clothing:						
Males.....		36.99	69.10			
Females.....		32.61	86.81			
All clothing.....	18.4	34.42	82.07			
Housing.....	10.9	.51	2.42			
Fuel and light.....	4.6	24.68	31.49			
Furniture and furnishings.....	4.9	26.96	48.62			
Miscellaneous.....	18.5	21.40	34.74			
Total.....	100.0	21.89	37.10			

¹ Decrease.

² No change.

The next table shows the changes in the cost of living from December, 1914, to December, 1919, inclusive, for four localities on the Pacific coast. The table is constructed in the same manner as the preceding one.

CHANGES IN THE COST OF LIVING IN FOUR PACIFIC COAST LOCALITIES FROM DECEMBER, 1914, TO DECEMBER, 1915.

Los Angeles, Calif.

Item of expenditure.	Per cent of total expenditure.	Per cent of increase from December, 1914, to December—				
		1915	1916	1917	1918	1919
Food.....	35.8	14.12	0.41	33.41	61.83	71.04
Clothing:						
Males.....		1.65	10.33	41.85	104.59	151.54
Females.....		3.96	18.36	48.29	113.79	180.45
All clothing.....	14.9	2.78	14.28	45.02	109.12	167.63
Housing.....	13.4	12.68	12.54	1.64	4.43	26.76
Fuel and light.....	3.1	.36	2.34	10.40	18.26	35.28
Furniture and furnishings.....	5.1	6.28	23.09	56.43	118.49	175.49
Miscellaneous.....	27.7	1.93	7.68	28.85	52.08	76.87
Total.....	100.0	11.93	7.68	28.85	58.03	85.33

Portland, Oreg.

Food.....	34.3	13.81	9.75	42.17	70.64	81.56
Clothing:						
Males.....		3.44	16.75	44.30	99.54	148.57
Females.....		2.60	14.71	44.47	93.12	136.91
All clothing.....	16.1	3.03	15.75	44.38	96.59	142.14
Housing.....	12.8	10.91	19.55	22.10	12.28	27.73
Fuel and light.....	4.9	1.96	3.44	20.24	30.85	42.30
Furniture and furnishings.....	6.1	2.87	18.02	54.47	109.01	145.13
Miscellaneous.....	25.7	13.05	6.14	31.23	57.91	71.60
Total.....	100.0	13.05	6.14	31.23	64.24	83.73

San Francisco and Oakland, Calif.

Food.....	37.9	14.31	9.63	35.90	60.24	74.15
Clothing:						
Males.....		2.14	14.43	42.05	118.40	173.85
Females.....		2.77	14.53	45.07	99.55	163.17
All clothing.....	16.6	2.46	14.48	43.56	108.96	170.44
Housing.....	14.8	1.72	12.52	14.02	13.93	4.67
Fuel and light.....	4.1	1.14	4.57	14.35	30.10	41.25
Furniture and furnishings.....	4.2	5.96	21.71	48.21	103.42	143.76
Miscellaneous.....	22.4	11.06	8.30	28.63	50.52	74.69
Total.....	100.0	11.66	8.30	28.63	57.77	87.76

Seattle, Wash.

Food.....	33.5	12.75	8.46	38.65	72.53	80.91
Clothing:						
Males.....		.79	10.87	34.81	89.88	135.00
Females.....		1.55	11.72	37.93	86.21	162.98
All clothing.....	15.8	1.19	11.31	36.44	87.97	154.53
Housing.....	15.4	12.42	15.41	1.55	44.31	71.50
Fuel and light.....	5.4	1.19	2.93	23.85	51.78	63.82
Furniture and furnishings.....	5.1	8.52	27.43	52.29	141.52	201.08
Miscellaneous.....	24.7	11.02	7.40	31.08	58.49	86.81
Total.....	100.0	11.02	7.40	31.08	69.87	97.67

¹ Decrease.

Following are the index numbers showing the changes in the cost of living from the average for 1913 to December, 1919, inclusive. These numbers are based on the figures for 31 localities, part of which appear above and part of which were published in the May number of the MONTHLY LABOR REVIEW.

INDEX NUMBERS OF CHANGES IN COST OF LIVING, 1913, TO DECEMBER, 1919.

[Average, 1913=100.]

Month and year.	Index number.	Month and year.	Index number.
Average for 1913.....	100	December, 1916.....	118
July, 1914.....	101	June, 1917.....	129
December, 1914.....	103	December, 1917.....	142
June, 1915.....	103	June, 1918.....	158
December, 1915.....	104	December, 1918.....	174
June, 1916.....	110	June, 1919.....	177
		December, 1919.....	199

Retail Price Changes in Great Britain.

THE following table gives for Great Britain the increase over July, 1914, in the cost of food and general family expenditure for May of each year, 1915 to 1920, and for each month in 1920. The food items included in this report are: Ribs and thin flank of beef, both British and chilled or frozen; legs and breast of mutton, British and chilled or frozen; bacon; fish; flour; bread; tea; sugar; milk; butter, fresh and salt; cheese; margarine; eggs; and potatoes.

The table gives percentage of increase, and is not one of relative prices, as is the table given for the United States. When making comparisons this should be borne in mind, and to obtain the relative prices it is necessary to add 100 to the percentage as given, e. g., for January, 1920, the increase in cost of food is 136 per cent, the relative price being 236.

The figures represent two comparisons: First, the increase in prices, based on the same kinds and quantities as used in July, 1914; second, the increase, based on the change in the standard of living, resulting from a substitution of one kind of food for another to meet war-time conditions.

The table shows that retail prices of food were 146 per cent higher in May, 1920, than in July, 1914, and that the increased cost of all items in the family budget was 141 per cent.

PER CENT INCREASE IN COST OF FOOD AND ALL ITEMS IN FAMILY BUDGET IN GREAT BRITAIN BASED ON JULY, 1914.

• [Compiled from the British Labor Gazette.]

Year and month.	Food.		All items in family budget.	
	Retail prices (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in consumption).	Cost (assuming same kinds and quantities).	Expenditures (allowing for estimated changes in consumption).
May, 1915.....	28			
May, 1916.....	1 55			
May, 1917.....	98	65	2 70	
May, 1918.....	107	41	95-100	55-60
May, 1919.....	107	81	105	90
1920.				
January.....	136	115	125	115
February.....	135	112	130	115
March.....	133	107	130	115
April.....	135	(⁶)	130-135	(⁶)
May.....	146	(⁶)	141	(⁶)

¹ Including tax on sugar and tea.

² Not including taxes.

³ Based on change in standard of food consumption adopted by the Ministry of Food.

⁴ The increase, excluding additional taxation, is 7 per cent less.

⁶ No longer calculable, mainly owing to decontrol.

Cost of Living in Argentina in 1913, 1917, and 1919.

FIGURES on the cost of living in Argentina are presented in Commerce Reports (Washington) for April 8, 1920, in an article which gives the following table of advances in prices of some of the staple foodstuffs, per kilo, since 1913. The conversions into United States money have been made on the basis of 1 paper peso equals 43 cents.

PRICES OF CERTAIN FOODSTUFFS PER KILO (2.2 POUNDS) IN ARGENTINA IN 1917 AND 1919 COMPARED WITH 1913.

Article.	1913	1917	1919	Article.	1913	1917	1919
Flour.....	\$0.06½	\$0.11	\$0.15	Rice.....	\$0.13	\$0.17½	\$0.34½
Potatoes.....	.03	.07	.11	Garbanzos (chick peas)*.....		.24	.30
Tea.....	1.29	2.00	2.45	Beef.....	.16	.17	.39
Bread.....	.08	.12½	.15	Cheese, common.....		.47	.77½

The report states that firewood, which sold for \$11.18 per metric ton in 1913, was \$18.06 in 1919.

The following table gives prices taken from price lists of middle-class shops in Buenos Aires. They are said to be prevailing prices encountered by the average careful shopper:

AVERAGE RETAIL PRICES IN MIDDLE-CLASS SHOPS IN BUENOS AIRES.

Article.	Unit.	Price.	Article.	Unit.	Price.
Vegetables:			Clothing, men's:		
Beans.....	Pound..	\$0.10	Suits, good.....	Each....	\$80.00
Peas.....	do.....	.10	Suits, ordinary.....	do.....	60.00
Corn, green.....	Dozen.....	.40	Suits, very common.....	do.....	35.00
Spanish beans.....	Pound..	.14	Shirts, ordinary.....	do.....	3.80
Rice.....	do.....	.18	Shirts, very ordinary.....	do.....	2.60
Tomatoes (in season).....	do.....	.44	Socks, ordinary.....	Pair.....	.80
Meats and fish:			Shoes, ordinary.....	do.....	13.00
Beef.....	do.....	.17	Shoes, cheap work.....	do.....	7.30
Pork.....	do.....	.23	Linen collars.....	Each.....	.88
Lamb.....	do.....	.17	Miscellaneous:		
Sardines, French.....	Can.....	.60	Cheese, common.....	Pound..	.85
Sardines, Norwegian.....	do.....	.33	Soap, common yellow.....	do.....	.30
Fresh fish.....	Pound..	.17	Soap, cheapest toilet.....	Bar.....	.09
Canned salmon.....	Can.....	.26	Firewood.....	Ton.....	14.00
Fruits:			Oil, heating.....	Gallon..	.70
Apples (North American, best grade).....	Dozen..	2.20	Tea, ordinary.....	Pound..	1.12
Apples (local, for cooking only).....	do.....	.70	Coffee, cheapest.....	do.....	.44
Prunes, dried.....	Pound..	.70	Jams, domestic.....	Small jar	1.70 to 1.32
Peaches, dried.....	do.....	.70	Calico (enough for one common house dress).....		1.30 to 3.45
Peaches (in season, medium).....	Dozen..	.65			
Oranges, fair.....	do.....	.86			
Bananas, very poor.....	do.....	.26			

With respect to rents the report makes the following comment:

With land values as high as \$85 (United States currency) per square foot in the central parts of Buenos Aires and single-story houses the prevailing type, rents are necessarily high. A five-room flat, exclusive of kitchen, suitable for the average mechanic, rents for \$60 per month, or actually more than his month's wages. Consequently several large families often occupy a single house, and even so there are cases of eviction because of inability to pay rent.

It is the custom to place the address of a house to be rented with a rent agent, who charges a fee of 10 pesos [\$1.30] to the prospective tenant before he gives the address of the vacant apartment. This means that a person looking for a flat often spends 50 or 60 pesos [\$21.50 to \$25.80] for information before suitable accommodations are found. The rents for four or five room apartments of the better class, usually without lighting fixtures or plumbing attachments, vary from \$125 to \$160 per month. These accommodations are considered suitable for what corresponds to the middle class in the United States.

The daily wages of workmen vary from 3 to 7 paper pesos (\$1.29 to \$3.01, par), according to the report. Gardeners and common laborers receive 3 to 4 pesos (\$1.29 to \$1.72, par) per day, carpenters and other mechanics usually 6 to 7 paper pesos (\$2.58 to \$3.01, par) per day, railway laborers 60 to 80 pesos (\$25.80 to \$34.30, par) per month, and street-car motormen and conductors in Buenos Aires recently established a minimum rate of 4.50 pesos (\$1.93½, par) per day. The report suggests that "at the present high price of food and rent the average laborer finds his wages unequal to the task of providing the necessities for his family."

WAGES AND HOURS OF LABOR.

Wages and Hours in Automobile, Car, Electrical Apparatus, Foundry, Machinery, Machine Tool, and Typewriter Industries.

IN THE following tables is presented a summary report on the industries included in the Industrial Survey of 1919 not covered by reports appearing in earlier numbers of the Monthly Labor Review. The industries included in this report are as follows: The manufacture of automobiles, cars, electrical apparatus, the foundry industry, the manufacture of machinery, machine tools, and typewriters. These industries have a common feature in the fact that they are all engaged in working up iron and steel into the form of finished products.

The limitations put upon the survey in the different industries are as follows: The automobile industry includes the manufacture of both pleasure cars and commercial cars. Of the 32 establishments covered in the investigation of the automobile industry, 13 manufactured only pleasure cars, 14 only commercial cars, while 5 manufactured both pleasure and commercial cars.

The investigation of the car industry was confined to establishments manufacturing freight cars on a commercial basis.

Under the heading electrical apparatus is included information concerning the manufacture of such electrical machinery as generators, motors, and transformers and such apparatus and supplies as telephone equipment, circuit breakers, rheostats, and wiring devices.

The foundries from which data were obtained were for the most part connected with establishments using their own castings. Automobiles were the final product of 1 of these establishments, electrical apparatus of 2, typewriters of 2, machine tools of 5, cars of 6, and machinery of 134.

Two classes of machine-shop establishments were included in the survey, those engaged in the manufacture of machine tools and those engaged in the manufacture of other forms of machinery. All establishments of the latter class are grouped under the heading "Machinery." The machines turned out by these establishments were such heavy products as stationary engines, mining machinery, ice-making machines, printing presses, sugar-mill machinery, and textile machinery. The machine-tool industry is so clearly defined that no explanation of the scope of the investigation is necessary.

For lack of a general term to describe the variety of products included under the heading "Typewriters," the name of the most important single one of those products has been applied to the group as a whole. In addition to the manufacture of typewriters is included the manufacture of adding machines, computing machines, and cash registers.

Table 1 shows the States included in the survey of the several industries covered by this article and the number of establishments and employees listed in each State.

TABLE 1.—NUMBER OF ESTABLISHMENTS AND NUMBER OF EMPLOYEES, BY INDUSTRY AND STATE.

State.	Automobile.		Car.		Electrical machinery.		Foundry.		Machinery.		Machine tool.		Type-writer.	
	Estab-lish-m'ts.	Em-ploy-ees.	Estab-lish-m'ts.	Em-ploy-ees.	Estab-lish-m'ts.	Em-ploy-ees.	Estab-lish-m'ts.	Em-ploy-ees.	Estab-lish-m'ts.	Em-ploy-ees.	Estab-lish-m'ts.	Em-ploy-ees.	Estab-lish-m'ts.	Em-ploy-ees.
Alabama.....							2	158	2	113				
California.....							6	506	7	619				
Colorado.....							3	197	3	216				
Connecticut.....					4	575	8	524	3	346	3	1,134	3	1,782
Delaware.....							2	158	2	168				
Georgia.....							3	132	3	76				
Illinois.....	3	586	4	3,714	4	946	10	1,068	10	1,383	3	691	4	1,831
Indiana.....	3	1,354	3	2,012	3	249	5	655	6	764	2	267	1	360
Iowa.....			1	406			7	1,171	5	306				
Kentucky.....							6	226	6	255				
Maine.....							2	285	2	622				
Maryland.....			1	231			2	86	2	71				
Massachusetts.....			1	319	5	1,941	3	854	3	625	3	644		
Michigan.....	9	6,697					5	731	5	258	2	235	2	2,420
Minnesota.....							2	383	3	847				
Missouri.....			2	1,708			9	994	9	647			2	259
New Hampshire.....							4	106	1	141				
New Jersey.....			1	222	3	316	6	750	5	376	4	595	2	384
New York.....	4	1,687	1	401	8	853	21	1,399	12	1,628	3	844	4	2,087
Ohio.....	5	4,986	1	471	6	405	10	1,470	4	479	3	1,252	2	1,860
Oregon.....							4	257	4	347				
Pennsylvania.....	3	881	4	3,622	5	701	10	1,852	7	2,006	2	445	5	972
Rhode Island.....							5	272	5	361	3	1,400		
Tennessee.....			2	1,157			1	140						
Vermont.....							2	32	1	70				
Washington.....							5	272	5	306				
West Virginia.....			1	422			3	434	2	241				
Wisconsin.....	5	2,259					4	318	6	689	1	328	3	419
Total.....	32	18,450	22	14,685	38	5,986	150	15,430	121	13,960	29	7,835	28	12,378

The speed with which it was necessary to carry out the survey made it impossible to obtain the records of all the establishments in an industry for the same pay roll period. As conditions were changing rapidly during the progress of the survey, the exact date of the material presented is of more importance than it would be in a normal year. The pay rolls in each industry were distributed by months, as shown in the following table:

TABLE 2.—NUMBER OF PAY-ROLL PERIODS IN SPECIFIED MONTHS.

Industry.	Total number of pay-roll periods.	Number of pay-roll periods in—								
		1918				1919				
		Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
Automobile.....	32					12	9	5	6	
Car.....	22						11	5	3	3
Electrical apparatus.....	38			1		5	8	15	7	2
Foundry.....	150		5	2	8	28	31	32	33	11
Machinery.....	121		1	2	7	26	23	28	25	9
Machine tool.....	29	3	22	4						
Typewriter.....	28					12	5	3	5	3

It will be seen that all the establishments included in the machine-tool industry fell in the months of September, October, and November, 1918, while the other industries were wholly, or in large part, confined to the early months of 1919. In the electrical-apparatus industry 1 schedule out of 38 fell in 1918; in the foundry industry, 15 out of 150; in the machinery industry, 10 out of 121. At the other extreme a comparatively small number of establishments fell as late as May, 1919, viz, 3 in the car industry, 2 in the electrical-apparatus industry, 11 in the foundry industry, 9 in the machinery industry, 3 in the typewriter industry. The material is presented as of the year 1919. So far as could be ascertained, no changes in rates of pay occurred in any of the industries during the progress of the survey.

Every effort was made to confine the survey to establishments working full time during the selected pay-roll period. In a few cases, however, it was found to be impossible to secure adequate representation of different localities without including one or more establishments working only part time. As part-time work necessarily results in abnormally low figures for hours worked and earnings received during the pay-roll period, the number of such establishments is hereby indicated. In the manufacture of electrical apparatus 1 part-time establishment was included in Massachusetts. In the foundry industry 12 were included, distributed as follows: 1 in Delaware, 1 in Iowa, 1 in Maine, 1 in Massachusetts, 2 in New Hampshire, 3 in New York, 1 in Pennsylvania, 1 in Rhode Island, and 1 in Vermont. In the machinery industry 1 part-time pay roll was included in each of the following States: Indiana, Iowa, Maryland, New Hampshire, and New York. In the typewriter industry 2 part-time pay rolls, both for establishments located in Pennsylvania, were included. In comparing hours and earnings of employees in these industries, due weight should be given to the effect of the part-time pay rolls upon the averages for the States and industries in which they were found.

The information concerning hours and earnings on which the tables are based was obtained directly from the pay rolls or other records of the companies by agents of the Bureau. Other information was obtained from responsible officials in personal interviews. Whenever the records of the company failed to indicate the time actually worked by pieceworkers during the selected pay-roll period, arrangements were made to have such a record kept for a future period. In all cases the figures copied by the agents represented the hours actually worked and earnings actually received.

As the material comes in to the office the figures for hours and those for earnings are both in incommensurable form on account of inequalities in the length of pay-roll periods and in the time worked by different individual employees. Before they can be presented in tabular form it is necessary to reduce both hours and earnings to a common denominator. The comparable figures selected for use in the following tables are hours worked per day and earnings per hour. These figures are obtained in the following manner:

The hours per day of each employee are obtained by dividing the number of hours worked by him during the pay-roll period by the number of week days, holidays omitted, in the pay-roll period. Thus in the case of pay rolls for a single week containing no holidays, the hours worked by each employee during the pay-roll period are divided

by six, whether the employee worked on each of the six days or not. Similarly the hours actually worked by an employee in any establishment during a pay-roll period containing 13 workdays were divided by 13, regardless of the number of days on which the employee worked. The resulting figure represents the number of hours per day that the employee would have worked if his time had been distributed uniformly among the week days of the pay-roll period.

The earnings of each employee are reduced to the form of average earnings per hour by dividing his total earnings for the pay-roll period by the total hours worked by him during the pay-roll period. The resulting figure indicates how much he would have earned per hour if his earnings had been distributed uniformly over all the hours actually worked by him during the period. The sum of these individual hourly earnings, divided by the number of employees in the group, equals the average hourly earnings for the group.

All one-week pay rolls included in the survey of these industries were six-day pay rolls. The half monthly and monthly periods, however, showed considerable differences in length. The following table shows for each industry the number of schedules covering each specified number of workdays.

TABLE 3.—SCHEDULE DISTRIBUTION BY NUMBER OF WORK DAYS IN THE PAY-ROLL PERIOD.

Industry.	Total number of schedules.	One week or 6 work days.	Two weeks, one-half month, or—					One month, or—		
			10 work days.	11 work days.	12 work days.	13 work days.	14 work days.	22 work days.	24 work days.	27 work days.
Automobile.....	32	20	.....	4	3	3	2	.....	.....	.....
Car.....	22	6	6	1	1	8	.....	.....	.....	.....
Electrical apparatus.....	38	29	.....	1	3	1	1	1	2	.....
Foundry.....	150	118	.....	2	7	15	6	.....	1	1
Machinery.....	121	87	.....	2	8	15	8	.....	.....	1
Machine tool.....	29	17	.....	.....	1	4	3	2	2	.....
Typewriter.....	28	20	.....	.....	2	2	4	.....	.....	.....

The significance of the figures in the different columns of Table 4, which follows, the method by which they were obtained and the limitations under which they should be used have been explained in detail in previous articles in the MONTHLY LABOR REVIEW dealing with the results of the survey.¹ The various figures in the present article have been computed by the same method as those in the earlier articles.

In a considerable number of instances in Table 4 employees in more than one occupation have been grouped together. This has been done largely on account of the limitations of space necessarily imposed upon an article of this kind. It has usually been done, however, only in cases where both the average hours and earnings and the distribution of employees by hours and earnings have been so nearly alike that the resulting figures could be used with equal confidence as showing the conditions in any one of the separate occupations.

¹ See especially MONTHLY LABOR REVIEW for January, 1920, pp. 120 to 124, and May 1920, pp. 96-100.

An exception should be noted in the case of employees working directly upon metal-working machinery. These employees are variously known as machinists, machine hands, and machine operators. In a general way, these terms indicate varying degrees of knowledge and skill possessed by the employees properly grouped under them. In practice, however, such lack of uniformity in the use of terms was found to prevail not only as between different metal-working industries, but even as between different establishments of the same industry, that the attempt to maintain this distinction in its entirety was found to be impracticable. It was usually possible to identify in any establishment a number of employees who deserved the title of skilled, all-around machinists. These employees have been brought together under that general occupation term. For employees of a less degree of skill, however, it was impossible to maintain any distinction based either on knowledge or on skill, which could be relied upon to give comparable figures between different parts of the country in the same industry and still more between different industries in which machine workers were employed. The only recourse was to throw machine workers who could not be identified as skilled machinists into one group. To that group has been given the general title Operators. As it includes people of varying degrees of skill and performing work requiring varying amounts of responsibility, the averages as given in the table are based upon returns embodying what must be recognized as an undesirably wide range of individual differences. They represent the average hours and earnings of all employees working at the specified metal-working machinery, except those who could be identified as machinists.

TABLE 4.—AVERAGE HOURS AND EARNINGS IN THE AUTOMOBILE, CAR, ELECTRICAL APPARATUS, FOUNDRY, MACHINERY, MACHINE TOOL, AND TYPEWRITER INDUSTRIES, BY SEX AND OCCUPATION.

Automobile.

Occupation.	Num-ber of estab-lish-ments.	Num-ber of employees.	Average actual hours worked during one pay period.				A ver- age full-time hours per week.	Per cent of full time worked.	Average actual earnings made during one pay period.					
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per week day.			Per week.	Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per hour.	Per week.
MALES.														
Assemblers.....	31	4,373	46.9	100.7	.....	8.0	48.0	94.5	\$23.83	\$39.96	.....	\$0.545	\$26.32	
Bench hands, machine shop.....	24	801	46.8	105.0	.....	8.3	49.8	98.4	23.01	60.08	.....	.542	25.74	
Blacksmiths.....	28	123	51.6	103.4	.....	8.5	51.0	90.9	29.06	60.39	.....	.575	29.47	
Blacksmiths' helpers.....	23	100	51.4	102.4	.....	8.4	50.4	99.8	22.50	48.92	.....	.460	23.36	
Boring-mill operators.....	20	160	49.5	104.4	.....	8.5	51.0	101.2	29.66	69.39	.....	.648	32.59	
Chippers, grinders, sand blasters, tumblers, and cleaners.....	21	377	48.9	95.6	.....	8.0	48.0	97.6	22.02	52.54	.....	.510	25.47	
Cushion makers.....	14	85	45.0	108.8	.....	7.9	47.4	93.6	30.39	74.96	.....	.672	32.61	
Cutters, cloth and leather.....	15	68	47.7	100.1	.....	8.0	48.0	93.8	23.37	76.98	.....	.667	31.72	
Drill-press operators.....	32	1,632	47.2	98.4	.....	8.1	48.6	95.9	23.71	57.35	.....	.541	26.33	
Gear cutters.....	12	115	52.2	103.3	.....	8.7	52.2	99.8	28.42	61.11	.....	.575	23.73	
Grinding-machine operators.....	26	911	47.8	101.8	.....	8.1	48.6	95.9	28.69	62.30	.....	.600	29.80	
Hardeners and furnace tenders.....	14	126	55.1	87.2	.....	9.1	54.6	106.0	26.50	59.68	.....	.533	29.27	
Laborers.....	29	802	47.8	98.5	.....	8.1	48.8	95.9	20.87	48.54	.....	.460	22.16	
Lathe operators.....	29	1,483	49.7	101.4	.....	8.3	49.8	97.8	27.92	62.86	.....	.594	29.49	
Machinists and machine repairers.....	18	292	50.8	103.1	.....	8.5	51.0	104.5	32.86	69.36	.....	.655	33.33	
Milling-machine operators.....	30	770	48.6	101.4	.....	8.2	49.2	96.3	25.17	59.15	.....	.549	27.31	
Packers and turnace helpers.....	10	129	52.1	99.7	.....	8.7	52.2	105.0	23.43	51.33	.....	.483	25.22	
Painters and varnishers, including letterers, monogram men, and signers.....	27	360	48.7	106.5	.....	8.4	50.4	98.0	32.94	50.55	.....	.707	36.00	
Painters, rough, including dippers, sanders, and rough-brush hands.....	29	684	48.3	106.4	.....	8.2	49.2	97.6	25.14	62.25	.....	.551	27.22	
Paint sprayers.....	8	50	50.3	98.9	.....	8.2	49.2	96.1	37.07	62.22	.....	.678	33.56	
Planer and shaper operators.....	16	68	47.1	109.2	.....	8.5	51.0	99.0	24.27	64.91	.....	.557	29.57	
Planer-press operators.....	18	200	45.6	107.5	.....	8.4	50.4	97.4	21.43	57.20	.....	.511	26.50	
Rubbers, rough stuff and varnish.....	18	319	46.2	110.3	.....	8.1	48.6	97.7	30.85	87.40	.....	.720	35.36	
Screw-machine operators.....	25	705	48.6	101.5	.....	8.3	49.8	99.0	26.71	59.39	.....	.608	34.32	
Setters, machine.....	16	118	54.7	100.6	.....	8.9	53.4	107.0	32.11	69.33	.....	.637	34.99	
Sheet-metal workers.....	26	705	46.2	107.7	.....	8.3	49.8	97.5	24.93	64.39	.....	.565	28.35	
Testers and adjusters.....	31	980	48.4	100.8	.....	8.1	48.6	92.1	23.03	52.45	.....	.496	24.25	
Toolmakers, die makers, and diesinkers.....	27	568	49.9	107.5	.....	8.7	52.2	104.2	37.32	80.79	.....	.748	38.31	
Top builders and back hangers.....	23	515	44.1	102.1	.....	7.7	46.2	92.2	30.98	80.13	.....	.741	34.27	
Total.....	32	17,827	47.8	101.7	.....	8.2	49.2	97.2	25.87	61.37	.....	.569	28.22	

TABLE 4.—AVERAGE HOURS AND EARNINGS IN THE AUTOMOBILE, CAR, ELECTRICAL APPARATUS, FOUNDRY, MACHINERY, MACHINE TOOL, AND TYPEWRITER INDUSTRIES, BY SEX AND OCCUPATION—Continued.

Automobile—Concluded.

Occupation.	Num-ber of estab-lish-ments.	Num-ber of em-ployees.	Average actual hours worked during one pay period.				Average actual earnings made during one pay period.									
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per week day.	Per week.	Average full-time hours per week.	Per cent of full time worked.	Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per hour.	Per week.		
FEMALES.																
Assemblers.....	7	64	45.1	93.7	.....	7.6	45.6	49.2	92.7	\$16.32	\$36.82	.....	\$0.382	\$17.34		
Bench hands, machine shop.....	3	23	.....	99.3	.....	8.2	49.2	50.7	97.0	.....	42.10	.....	.428	19.61		
Bench hands, trim shop.....	7	82	47.8	102.9	.....	8.0	48.0	50.2	95.6	19.11	37.84	.....	.377	18.47		
Drill-press operators.....	9	115	46.8	86.8	.....	7.3	43.8	48.6	90.1	16.20	35.76	.....	.388	16.97		
Gear cutters.....	2	12	.....	90.7	.....	8.0	48.0	46.7	102.8	.....	42.72	.....	.471	24.16		
Grinding-machine operators.....	5	23	44.0	93.4	.....	7.8	46.8	48.0	97.5	13.21	37.17	.....	.378	18.09		
Lathe operators.....	4	33	44.8	93.5	.....	7.6	45.6	49.1	92.9	17.25	35.41	.....	.382	16.76		
Milling-machine operators.....	6	30	48.0	91.1	.....	7.8	46.8	50.2	93.2	16.31	35.68	.....	.353	16.34		
Screw-machine operators.....	5	18	42.8	95.5	.....	7.8	46.8	48.4	96.7	16.68	41.12	.....	.414	19.76		
Sewing-machine operators.....	16	223	46.4	101.8	.....	7.9	47.4	49.6	95.6	17.32	36.95	.....	.370	17.77		
Total.....	21	623	46.3	96.8	.....	7.8	46.8	49.3	94.9	16.98	37.31	.....	.380	17.81		
Car.																
MALES.																
Air brakemen.....	21	227	50.0	96.4	.....	8.6	51.6	54.1	95.4	\$33.29	\$73.56	.....	\$0.753	\$32.39		
Axle turners.....	21	220	53.2	90.5	.....	8.0	48.0	53.6	89.6	39.99	68.78	.....	.754	30.74		
Body builders, wood.....	18	1,869	46.6	97.4	.....	8.0	48.0	54.0	88.9	26.55	72.02	.....	.714	30.20		
Bulldozers.....	21	103	47.6	103.6	.....	8.6	51.6	54.1	95.4	31.84	80.00	.....	.748	36.38		
Bull-river operators.....	21	237	44.5	95.6	.....	8.4	50.4	54.3	92.8	32.41	87.42	.....	.891	39.60		
Crane operators.....	17	281	42.2	106.7	.....	9.0	54.0	52.9	102.1	22.69	56.03	.....	.527	24.26		
Drill-press operators.....	22	217	47.8	96.8	.....	8.1	48.6	52.1	93.3	26.27	64.84	.....	.665	29.09		
Fitters and reamers, steel.....	22	2,270	44.4	91.8	.....	8.0	48.0	53.9	89.1	29.39	71.90	.....	.770	31.03		
Forging-machine operators.....	21	183	48.1	99.6	.....	8.4	50.4	53.4	94.4	29.20	74.96	.....	.740	35.28		
Hammersmiths, Bradley, drop and steam.....	20	167	51.8	93.3	.....	8.0	48.0	51.8	92.7	32.64	81.19	.....	.887	36.74		
Handy men.....	21	990	43.0	96.1	.....	8.1	48.6	53.6	90.7	20.70	45.49	.....	.877	20.15		
Helpers and heaters.....	22	1,637	45.2	94.7	.....	8.2	49.2	53.7	91.6	24.65	64.01	.....	.655	27.86		
Holders-on and buckers-up.....	21	589	44.2	89.7	.....	7.8	46.8	53.5	87.5	31.49	82.30	.....	.885	35.08		

Hydraulic-press operators.....	15	93	54.4	93.1	8.7	52.2	53.9	96.8	39.03	80.25	37.61
Labors.....	22	1,791	49.9	91.0	7.7	46.2	54.1	85.4	19.21	35.95	16.87
Painters.....	17	96	47.3	98.9	8.5	51.0	53.5	95.3	30.18	77.15	34.82
Punch-press operators.....	22	863	46.7	90.5	7.7	46.2	53.4	86.5	30.78	62.81	28.25
Riveters, pneumatic.....	22	520	47.7	98.0	8.4	50.4	53.9	90.5	30.90	76.65	33.68
Rivet heaters and rivet stickers.....	22	765	46.3	91.9	8.1	48.6	53.5	90.8	32.00	87.82	37.27
Shear operators.....	21	651	44.6	90.5	7.7	46.2	54.4	84.9	32.60	61.08	27.46
Truck builders.....	22	192	47.7	99.9	8.5	51.0	53.0	96.2	32.53	76.46	34.24
Welders, oxyacetylene.....	22	194	46.8	94.4	8.5	51.0	54.8	93.1	27.75	72.78	31.15
Wheel borers.....	20	63	39.7	94.6	8.1	48.6	54.0	90.0	25.00	64.00	26.43
Wheel pressers.....	21	50	42.7	98.6	8.3	49.8	53.2	93.6	23.83	67.16	26.91
Woodworking-machine operators.....	21	47	51.2	102.5	9.0	54.0	53.3	95.3	31.66	74.83	30.22
Woodworkers.....	19	370	46.4	103.8	8.5	51.0	53.6	93.1	26.54	59.09	26.49
Total.....	22	14,885	46.4	94.2	8.1	48.6	53.8	90.3	26.79	65.19	27.98

Electrical apparatus.

MALES.											
Armature winders.....	15	106	49.2	101.9	8.4	50.4	50.6	99.6	\$27.28	\$61.30	\$28.60
Assemblers.....	35	1,191	47.1	105.1	7.8	46.8	50.7	92.3	23.62	48.76	23.32
Boring-mill operators.....	9	37	46.4	103.8	8.3	48.8	50.7	98.2	31.94	75.07	34.71
Coil winders.....	18	156	45.7	99.6	7.6	45.6	50.3	90.7	30.62	48.99	28.77
Connectors and insulators.....	13	46	43.5	107.9	7.7	46.2	50.9	90.8	16.94	58.10	18.46
Drill-press operators.....	30	296	46.9	103.8	8.0	48.0	51.1	94.0	23.06	38.77	22.81
Fitters.....	14	84	48.1	108.4	8.1	48.6	51.1	93.1	25.02	58.19	25.37
Grinders.....	18	76	46.1	122.8	7.8	46.8	50.3	93.0	27.30	64.41	27.00
Handy men.....	31	250	46.9	117.2	7.8	46.8	50.1	93.4	22.99	47.53	22.11
Inspectors and testers.....	26	234	48.3	111.5	8.1	48.6	50.2	96.8	24.87	54.60	24.42
Labors.....	21	224	46.4	104.6	8.0	48.0	50.3	95.4	18.96	42.34	19.06
Lathe operators.....	28	346	47.1	105.8	8.1	48.6	51.3	91.2	28.07	54.99	27.76
Machine operators.....	4	63	48.3	105.8	8.0	48.3	50.2	96.2	26.63	52.33	26.63
Machine setters.....	15	58	47.8	112.4	8.0	48.0	50.4	95.2	27.78	57.61	27.61
Machinists.....	23	140	47.7	109.5	8.1	48.6	50.0	97.2	30.42	67.11	30.77
Metal finishers.....	18	66	47.5	102.9	8.0	48.0	50.3	95.4	26.20	32.18	24.30
Milling-machine operators.....	23	102	48.3	107.6	8.2	49.2	50.5	97.4	23.94	56.36	24.60
Planer and shaper operators.....	11	25	44.9	108.4	8.0	48.0	50.9	94.3	24.74	71.27	26.90
Polishers and buffers.....	16	62	50.0	110.3	8.3	49.8	51.7	96.3	25.94	98.43	26.80
Punch-press operators.....	26	190	46.7	110.3	7.9	47.4	50.0	93.1	24.93	41.53	25.58
Screw-machine operators.....	22	218	47.5	122.6	8.4	50.4	50.9	99.0	23.41	79.47	31.3
Sheet-metal workers.....	5	20	50.7	102.9	8.5	51.0	50.4	101.2	26.27	41.08	24.64
Toolmakers.....	31	240	48.4	99.1	8.1	48.6	50.7	95.9	36.03	85.64	28.75
Welders.....	5	37	41.0	102.9	7.8	46.8	49.4	82.6	30.16	150.12	35.53
Wrenchmen.....	7	41	46.8	163.3	6.8	40.8	49.5	84.5	23.42	142.48	31.67
Total.....	38	4,368	47.3	106.6	8.0	48.0	50.6	94.9	25.53	50.84	25.09

TABLE 4.—AVERAGE HOURS AND EARNINGS IN THE AUTOMOBILE, CAR, ELECTRICAL APPARATUS, FOUNDRY, MACHINERY, MACHINE TOOL, AND TYPEWRITER INDUSTRIES, BY SEX AND OCCUPATION—Continued.

Electrical apparatus—Concluded.

Occupation.	Num-ber of estab-lish-ments.	Num-ber of em-ployees.	Average actual hours worked during one pay period.				Aver- age full-time hours per week.	Per cent of full time worked.	Average actual earnings made during one pay period.				
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per week day.			Per week.	Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per hour.	Per week.
FEMALES.													
Armature winders.....	5	129	42.9	108.5	199.2	7.2	42.9	85.6	\$19.06	\$27.58	\$33.41	\$0.450	\$19.03
Assemblers.....	22	708	46.8	108.5	199.2	7.8	46.8	92.5	14.33	23.41	38.71	.294	13.71
Coil winders.....	22	232	43.6	103.7	184.2	7.5	45.0	90.4	15.27	23.63	39.50	.337	15.03
Connectors and insulators.....	17	157	44.7	75.8	175.9	7.6	45.6	92.1	15.21	21.21	50.68	.335	14.66
Drill-press operators.....	13	106	46.3	96.3	193.3	7.7	46.2	92.2	15.62	19.25	62.73	.334	13.19
Inspectors and testers.....	12	147	45.8	112.9	202.8	7.7	46.2	92.0	14.60	24.80	49.07	.279	12.90
Lathe operators.....	3	47	39.0	109.5	204.9	7.8	46.8	92.3	9.74	20.04	57.10	.276	12.64
Metal finishers.....	6	13	48.0	85.7	214.0	7.6	45.6	87.7	16.22	19.25	65.75	.319	14.30
Milling-machine operators.....	2	5	45.1	99.0	201.2	7.5	45.1	91.7	18.26	23.70	63.97	.406	18.26
Punch-press operators.....	11	66	45.0	88.9	201.2	7.5	45.0	90.2	16.48	28.02	71.78	.378	16.57
Screw-machine operators.....	5	8	39.0	88.9	201.2	6.7	40.2	81.2	10.10	28.02	63.97	.259	11.52
Total.....	30	1,618	45.4	104.2	198.6	7.7	46.2	92.0	15.30	25.71	54.69	.322	14.53

Foundry.

MALES.												
Chippers and grinders.....	123	1,719	43.6	104.7	207.24	8.3	49.8	91.7	\$26.20	\$52.62	\$101.84	\$0.437
Core makers, first class.....	141	1,136	47.4	105.5	178.72	7.9	47.4	91.5	30.39	73.38	125.74	.670
Core makers, second class.....	47	293	49.7	102.4	187.75	8.2	49.2	88.8	26.63	56.27	96.01	.539
Cranemen.....	76	373	55.9	123.3	199.82	9.5	57.0	100.6	29.15	63.17	111.14	.534
Cupola tenders.....	139	278	53.7	119.1	212.99	9.0	54.0	100.6	27.34	62.96	138.17	.517
Handy men.....	61	491	49.7	123.3	211.39	8.8	52.8	93.8	25.10	61.89	112.31	.512
Laborers.....	144	5,031	49.8	107.8	175.71	8.4	50.4	92.1	21.61	49.64	82.06	.440
Molders, bench.....	101	844	45.2	93.1	150.00	7.6	45.6	88.5	28.11	56.99	87.90	.618
Molders, floor.....	146	2,583	47.4	99.1	185.70	7.9	47.0	92.0	32.29	73.93	133.35	.700
Molders, floor, specialist.....	17	175	46.6	94.1	139.55	8.0	48.0	93.0	30.49	41.35	129.21	.600
Molders, machine.....	60	805	48.5	111.6	.....	8.3	49.8	90.5	29.22	67.37	129.21	.596

54	707	47.9	93.4	199.31	7.8	46.8	51.3	91.2	23.36	42.36	100.02	.481	22.29
107	593	47.6	103.7	191.76	8.0	48.0	51.1	93.9	33.05	78.77	158.88	.729	34.73
103	316	49.0	105.3	186.02	8.2	49.2	52.4	93.9	25.91	55.50	118.65	.525	26.08
150	15,347	49.3	105.6	188.9	8.2	49.2	53.8	91.4	26.28	59.11	110.34	.540	26.82
Total.													
FEMALES.													
13	83	43.5	31.7	.....	7.1	42.6	50.4	84.5	12.66	34.61	.....	.333	14.22
Core makers, second class.													

Machinery.

MALES.													
35	451	48.7	111.3	.....	8.1	48.6	51.1	95.1	\$25.85	\$82.23	.....	\$0.038	\$31.07
95	278	47.2	105.7	223.6	7.9	48.0	51.3	93.6	32.23	65.69	\$192.61	.669	31.91
85	336	49.4	104.6	217.1	7.9	47.4	50.9	93.1	24.00	48.79	98.03	.494	28.57
66	379	50.3	107.8	226.2	8.4	50.4	51.7	97.5	30.27	70.23	203.75	.650	32.81
16	78	45.4	102.4	245.0	8.1	48.6	51.5	94.4	19.09	51.43	122.75	.471	32.47
52	197	51.8	116.8	238.1	9.0	54.0	51.9	104.0	27.08	58.81	136.62	.517	33.81
94	905	48.3	106.8	215.3	8.1	48.6	51.6	94.2	24.06	57.39	123.04	.510	24.93
81	1,398	49.7	104.4	218.5	8.2	49.2	53.0	94.6	27.81	64.53	155.92	.589	28.88
73	1,463	49.4	109.5	220.6	8.3	49.8	51.4	96.9	31.32	69.89	137.64	.690	31.20
53	561	48.8	111.8	215.7	8.2	49.2	52.9	98.0	21.85	55.96	110.50	.498	24.41
27	91	49.7	114.1	244.5	8.4	50.4	52.3	96.4	25.98	67.73	161.18	.549	28.12
45	275	49.6	111.0	221.1	8.2	49.2	52.2	94.3	24.59	59.09	145.05	.525	25.86
16	82	49.2	108.7	224.4	8.2	49.2	51.4	95.7	33.05	69.95	115.73	.493	38.00
94	1,066	49.4	108.4	215.1	8.1	48.6	51.9	93.6	24.05	50.50	115.73	.493	38.00
10	32	52.7	108.5	225.9	8.3	49.8	50.4	98.8	30.99	66.04	146.30	.652	32.79
10	39	51.4	122.2	243.5	9.4	56.4	54.0	104.4	28.57	71.08	171.81	.565	31.36
40	389	51.4	116.9	215.0	8.5	51.0	53.0	96.2	25.09	62.61	127.05	.516	26.05
108	2,101	48.6	104.6	235.2	8.2	49.2	52.5	93.7	19.54	44.70	109.80	.409	20.13
21	80	49.5	106.7	244.9	8.4	50.4	51.6	97.7	34.85	69.18	177.95	.683	34.78
99	1,483	47.5	107.2	246.0	7.9	47.1	49.6	95.6	33.91	71.73	173.74	.714	33.32
35	363	50.0	107.9	216.6	8.2	49.2	51.8	95.0	26.53	65.04	138.63	.561	28.20
37	126	52.7	115.9	211.7	8.8	52.8	52.7	100.2	31.51	66.31	132.61	.591	31.12
20	59	47.0	104.6	.....	7.9	47.4	51.3	92.4	34.09	66.88	.....	.700	33.28
66	325	50.1	100.0	223.4	8.4	50.4	51.5	97.9	30.96	73.95	195.12	.667	32.85
21	44	49.2	116.9	.....	8.4	50.4	52.6	95.8	24.49	59.53	.....	.508	25.43
6	32	47.6	127.8	.....	8.4	50.4	51.0	98.8	27.11	104.54	.....	.654	33.74
39	179	49.6	118.1	219.0	8.4	50.4	52.2	96.6	26.30	59.49	123.49	.525	26.55
45	134	47.5	107.2	224.1	8.1	48.6	51.3	94.7	27.21	60.04	151.79	.573	28.13
30	139	46.1	102.5	248.6	7.9	47.4	52.6	90.1	23.58	54.37	146.90	.529	24.82
63	354	49.4	105.8	233.9	8.3	49.8	51.1	97.5	34.26	72.53	189.41	.699	37.97
49	369	49.1	101.3	224.0	8.1	48.6	51.2	94.9	26.88	57.98	172.13	.573	28.12
33	79	45.5	114.1	223.3	8.1	48.6	52.0	93.5	25.01	65.11	123.08	.561	27.39
121	13,817	49.0	106.6	224.5	8.2	49.2	51.7	.....	26.95	61.15	139.47	.579	27.59
Total.													

TABLE 4.—AVERAGE HOURS AND EARNINGS IN THE AUTOMOBILE, CAR, ELECTRICAL APPARATUS, FOUNDRY, MACHINE, MACHINE TOOL, AND TYPEWRITER INDUSTRIES, BY SEX AND OCCUPATION—Continued.

Machinery—Concluded.

Occupation.	Num-ber of estab-lish-ments.	Num-ber of em-ployees.	Average actual hours worked during one pay period.				Aver-age full-time hours per week.	Per cent of full time worked.	Average actual earnings made during one pay period.				
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per week day.			Per week.	Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per hour.	Per week.
FEMALES.													
Assemblers.....	1	3	51.3	.....	.....	8.5	51.0	94.4	\$12.07	.....	.....	\$0.233	\$12.07
Drill-press operators.....	5	17	44.6	99.0	.....	7.4	44.4	82.5	13.67	.....	.....	.333	14.73
Engine-lathe operators.....	4	9	35.3	93.5	.....	6.2	37.2	70.7	11.42	.....	.....	.349	12.47
Fitters, second class.....	3	55	43.4	116.4	178.6	6.9	41.4	53.3	14.06	37.56	\$76.67	.390	16.63
Grinders.....	3	4	39.0	123.0	.....	7.2	43.2	51.3	14.82	46.92	.....	.351	16.15
Inspectors and testers.....	3	22	46.5	.....	184.0	7.2	43.2	52.8	11.17	.....	64.65	.295	12.79
Milling-machine operators.....	5	22	34.6	128.0	.....	7.4	44.4	84.9	12.07	66.10	96.46	.456	20.67
Punch-press operators.....	1	4	.....	.....	202.8	8.1	48.6	93.5	.....	.....	83.36	.384	18.53
Screw-machine operators.....	2	2	54.0	130.0	217.7	9.2	53.2	101.3	13.37	46.27	.....	.302	16.60
Shapers.....	1	4	47.9	.....	.....	3.0	48.0	100.0	17.95	.....	.....	.375	17.95
Turret-lathe operators.....	1	1	18.0	.....	.....	3.0	18.0	33.3	4.95	.....	.....	.275	4.95
Total.....	11	143	42.9	112.7	186.7	7.1	42.6	80.5	12.90	43.36	79.54	.369	16.10

Machine tool.

MALES.												
25	56	45.2	123.6	197.2	8.3	49.8	53.8	92.6	\$26.88	\$79.00	\$140.36	\$0.010
17	62	49.5	105.2	198.8	8.3	49.8	51.7	96.3	20.38	49.88	111.42	.498
23	131	55.5	122.5	195.7	8.7	52.2	54.2	96.3	31.38	75.46	114.82	.589
12	82	53.4	122.6	196.8	8.8	52.8	53.3	99.1	21.37	62.77	103.38	.450
14	37	52.0	110.5	205.5	8.7	52.2	54.9	95.1	21.64	54.77	100.70	.452
28	367	53.4	111.9	188.8	8.6	51.6	54.7	94.3	25.92	59.46	116.28	.522
28	880	52.4	108.4	193.2	8.5	51.0	53.5	94.8	26.93	60.82	123.53	.550
28	940	53.0	115.0	206.8	8.8	52.8	53.5	98.7	31.57	71.55	172.99	.676
26	691	53.9	108.0	198.4	8.7	52.2	53.9	96.8	26.46	55.41	120.51	.524
24	159	64.1	117.2	195.3	8.9	53.4	53.3	100.2	28.79	58.67	132.98	.565
27	319	53.7	114.5	188.5	8.8	52.8	54.9	96.2	28.65	61.46	122.83	.549
2	5	.....	.....	184.9	7.7	46.2	50.4	93.7	.....	.....	142.62	.755
												\$30.56
												.498
												.589
												.450
												.452
												.522
												.550
												.676
												.524
												.565
												.549
												.755
												35.66

Handy men..... Hardeners..... Inspectors..... Laborers..... Machinists..... Milling-machine operators..... Millwrights..... Pattern makers..... Planer operators..... Scraper bands..... Screw-machine operators..... Shaper operators..... Toolmakers..... Turret-lathe operators..... Other machine operators..... Total.....	29	611	52.2	113.1	190.4	8.5	51.0	54.0	94.4	23.41	52.53	93.30	.462	23.66	
	12	82	53.9	108.6	231.5	8.9	53.4	54.0	98.9	31.25	60.14	190.45	.596	32.29	
	18	216	54.7	114.7	207.3	8.9	53.4	53.2	100.4	28.28	64.17	156.37	.574	30.59	
	28	1,017	55.4	115.3	187.7	8.5	51.0	54.0	94.4	21.41	49.83	83.87	.424	21.86	
	14	93	55.4	96.2	199.0	8.7	52.2	51.2	102.0	38.05	70.61	143.98	.705	36.77	
	23	358	53.1	113.3	187.5	8.6	51.6	54.3	95.0	27.51	57.17	114.82	.534	34.43	
	16	74	57.0	125.3	195.0	8.5	51.0	52.0	98.1	35.38	72.30	139.26	.684	27.43	
	23	91	51.6	111.5	200.1	8.6	51.6	54.4	94.9	30.64	78.51	132.93	.684	24.81	
	29	254	53.0	110.4	206.8	8.8	52.8	54.1	97.6	27.78	71.08	146.37	.689	32.76	
	22	371	52.1	108.5	199.2	8.7	52.2	54.2	96.3	26.20	52.28	107.62	.581	31.11	
	19	162	53.5	106.1	205.1	8.7	52.2	53.6	97.4	25.47	47.13	133.59	.552	28.59	
	13	86	52.1	114.8	199.9	8.7	52.2	54.8	95.3	25.04	61.86	122.46	.514	27.11	
	26	224	53.3	109.8	195.4	8.5	51.0	53.5	95.3	32.84	63.62	140.23	.639	32.47	
	22	235	52.4	124.2	203.8	8.9	53.4	54.4	98.2	25.68	73.63	120.59	.546	29.42	
19	128	51.8	66.1	153.3	8.1	48.6	53.4	91.0	25.01	40.66	95.90	.501	24.30		
	29	7,681	52.8	112.7	196.0	8.6	51.6	53.9	95.8	26.74	50.98	125.05	.576	28.20	
FEMALES.															
Drill-press operators..... Engine-lathe operators..... Gear cutters..... Grinders..... Handy men..... Inspectors..... Laborers..... Milling-machine operators..... Total.....	4	28	47.0	.....	119.8	7.0	42.0	51.8	81.1	14.59	.....	39.59	.316	13.25	
	5	44	48.4	.....	104.4	7.9	47.4	52.2	80.8	16.56	.....	40.50	.332	15.83	
	3	14	43.9	.....	.....	7.5	44.9	49.4	91.1	18.48	.....	.....	.416	18.48	
	5	5	43.4	.....	.....	7.2	43.4	50.0	86.4	16.06	.....	.....	.388	16.06	
	1	4	50.9	.....	.....	8.5	50.9	55.0	92.7	15.42	.....	.....	.303	15.42	
	2	23	48.2	.....	.....	8.0	48.2	50.4	95.2	16.09	.....	.....	.334	16.09	
	1	1	.....	.....	192.0	8.0	48.0	48.0	100.0	.....	.....	67.60	.352	16.90	
	3	35	48.7	.....	175.6	7.8	46.8	52.5	89.1	18.22	.....	60.72	.366	17.13	
		8	154	47.7		156.9	7.7	46.2	51.6	89.5	16.62		50.60	.338	15.95
	Typeewriter.														
Aligners..... Assemblers, final and sectional..... Assemblers, part, and welders..... Drill-press operators..... Filers, fitters, and straighteners..... Gear cutters and lathe and planer operators..... Grinders, machine..... Handy men..... Hardeners, case, and annealers..... Inspectors, final..... Inspectors, part..... Japanners and enamellers, first class..... Japanners and enamellers, second class..... Laborers..... Machine setters..... Total.....	14	265	57.3	129.9	.....	9.5	57.0	54.0	105.6	\$37.05	\$53.14	.....	\$0.563	\$32.19	
	28	1,591	50.5	112.9	.....	8.5	51.0	52.3	97.5	27.11	44.32	.....	.498	25.72	
	28	546	50.7	126.5	.....	8.6	51.6	53.3	96.8	21.12	45.13	.....	.398	20.77	
	26	546	50.3	112.2	.....	8.4	50.4	52.8	95.5	23.65	44.47	.....	.452	22.95	
	26	476	50.8	124.4	.....	8.6	51.6	52.7	97.9	26.91	49.94	.....	.498	25.85	
	21	136	51.7	111.0	.....	8.8	52.8	52.6	100.4	27.18	49.20	.....	.503	26.56	
	22	268	50.2	113.9	.....	8.4	50.4	52.6	95.8	27.03	42.07	.....	.514	25.51	
	25	389	52.8	119.6	.....	8.8	52.8	52.7	100.2	23.30	40.55	.....	.416	22.23	
	24	53	51.8	125.1	.....	8.7	52.2	51.5	101.4	25.45	57.00	.....	.485	25.48	
	27	525	51.3	135.3	.....	8.8	52.8	52.0	101.5	22.93	66.03	.....	.532	29.77	
	24	446	51.1	117.9	.....	8.6	51.6	52.3	98.7	22.74	44.02	.....	.437	22.23	
	19	188	50.4	125.8	.....	8.5	51.0	52.2	97.7	27.77	47.28	.....	.545	27.25	
	24	167	47.4	112.6	.....	7.9	47.4	52.8	89.8	21.91	40.11	.....	.446	21.09	
	26	415	52.0	110.9	.....	8.8	52.8	52.8	100.0	20.13	39.34	.....	.376	19.79	
25	255	53.3	134.6	.....	9.1	54.6	52.5	104.0	29.41	60.90	.....	.533	23.33		

TABLE 4.—AVERAGE HOURS AND EARNINGS IN THE AUTOMOBILE, CAR, ELECTRICAL APPLIANCE, FOUNDRY, MACHINERY, MACHINE TOOL, AND TYPEWRITER INDUSTRIES, BY SEX AND OCCUPATION—Continued.

Occupation.	Num-ber of estab-lish-ments.	Num-ber of em-ployees.	Average actual hours worked during one pay period.				Average actual earnings made during one pay period.	Per hour.	Per week.	
			Weekly pay periods.	Biweekly and semi-monthly pay periods.	Monthly pay periods.	Per week.				
MALES—concluded.										
Machinists.....	24	176	52.5	110.8	52.2	52.9	\$30.79	\$55.01	\$0.574	\$30.00
Milling-machine operators.....	27	552	50.6	110.2	50.4	53.0	23.97	42.98	1.54	23.03
Platers, electro.....	19	33	51.6	120.7	51.0	52.9	28.45	58.52	3.38	28.01
Polishers, fine, and buffers.....	24	336	48.6	126.3	48.3	50.8	28.78	55.12	3.96	27.98
Polishers, rough.....	22	129	50.1	114.9	50.4	53.3	26.56	46.33	4.84	24.40
Punch-press operators.....	27	310	48.8	101.7	48.6	52.0	22.61	37.84	4.37	21.21
Screw-machine operators.....	27	522	51.2	117.9	50.1	52.6	28.14	49.48	5.21	27.10
Spring-winder operators.....	15	31	47.3	120.6	48.6	51.8	20.28	44.88	4.15	26.27
Tool and die makers.....	28	590	52.2	113.1	52.2	52.1	37.49	74.68	7.19	37.02
Total.....	28	8,880	51.1	118.6	51.6	52.6	26.77	48.53	.499	26.04
FEMALES.										
Aligners.....	4	19	54.1	129.4	55.2	56.6	19.88	38.76	.313	17.19
Assemblers, final and sectional.....	21	337	47.1	105.6	47.4	51.8	16.35	27.29	.317	15.02
Assemblers, part, and welders.....	22	718	48.1	108.3	48.0	51.1	14.71	24.80	.278	13.63
Drill-press operators.....	22	517	46.8	100.2	46.2	51.1	13.70	25.09	.299	13.01
Files, fitters, and straighteners.....	18	469	41.3	118.6	42.6	51.1	13.71	32.19	.319	13.55
Gear cutters and lathe and planer operators.....	8	66	49.3	102.1	48.0	50.9	15.36	21.67	.301	14.78
Grinders, machine.....	25	40	46.2	140.0	46.8	52.1	14.35	36.27	.308	14.39
Handy men.....	9	29	45.7	85.8	45.0	50.3	14.21	18.00	.296	13.46
Inspectors, final.....	4	7	46.7	101.3	46.7	50.7	17.09	34.3	.343	17.09
Inspectors, part.....	22	572	46.9	101.3	46.8	51.0	13.51	23.14	.275	13.01
Painters and enamellers, first class.....	3	4	51.7	138.0	53.4	52.3	38.82	38.82	1.38	17.92
Painters and enamellers, second class.....	12	79	47.0	106.4	46.2	53.9	14.01	24.34	.266	12.47
Laborers.....	11	72	46.7	128.2	47.4	50.9	13.09	30.48	.278	13.10
Milling-machine operators.....	19	196	47.1	107.0	47.1	51.0	16.81	29.13	.338	16.08
Polishers, fine, and buffers.....	5	19	49.2	104.0	48.4	54.3	18.27	42.60	.368	18.61
Polishers, final, and buffers.....	13	274	47.7	111.6	48.0	52.1	15.26	30.50	.308	14.83
Punch-press operators.....	8	30	45.4	86.8	46.2	51.5	20.44	36.50	.350	16.77
Screw-machine operators.....	8	35	45.2	86.2	45.0	51.2	13.61	23.46	.263	13.17
Spring-winder operators.....										
Total.....	25	3,498	46.4	106.0	46.8	51.6	14.67	26.45	.298	13.98

Wages and Hours of Labor in Anthracite Coal Mining Industry, 1919 and 1920.

THIS article presents in a summary form the facts as to the hours of labor and the earnings of employees in the anthracite coal fields of Pennsylvania in 1919 and 1920.

The figures for 1919 were gathered for the one-half month pay period ending January 31, while the figures for 1920 are for a similar period ending March 31. In the figures for 1919, 16,209 employees are represented, employed at 22 collieries of 10 companies, while for 1920, 10,821 employees are represented, employed at 16 collieries of 8 companies.

Five collieries for which figures are shown for 1919 are not included in the figures for 1920, because of circumstances which made it impossible to secure representative data from these establishments. Three collieries which furnished data in 1919 were shut down during the 1920 period because of floods which had drowned out the workings. Data were secured at two collieries in 1920, for which no figures were shown in 1919.

The periods for which figures are presented were ones of full production, all the collieries operating full time during the period in 1919, while only one lost any operating time during 1920. Out of 14 possible days of operation this colliery operated only 10 days, being forced to close down 4 days because of flood conditions.

The material on which this article is based was obtained directly from the pay rolls and other records of the several companies by agents of the Bureau. A record of the time spent in the mines by tonnage workers, which ordinarily does not form a part of the records, was especially kept during these periods. Because of the fact that the working places of the miners are widely distributed and at unequal distances from the entrances to the mines, the time checked was the time at which miners entered and left the mines. Consequently all figures relating to the hours of those miners and miners' laborers who work on a tonnage basis represent the time spent in the mines and not that spent at the working places. It is estimated that in general it takes the miners from 15 minutes to one hour to get to their working places after entering the mines.

The rates of wages and hours of labor in the anthracite coal industry in 1919 and 1920, by occupation, are shown in Table 1.

22	16	314	217	128.6	133.2	9.0	9.5	127.3	127.4	101.0	104.6	64.62	66.71	.503	.501	63.98	63.89
18	12	81	54	129.1	123.4	9.2	8.8	112.0	112.4	115.3	109.8	53.70	52.39	.410	.424	45.93	47.72
22	16	1,211	718	120.0	118.5	8.5	8.5	114.9	113.4	104.4	104.5	51.94	51.94	.434	.438	49.69	49.61
21	16	199	142	122.6	119.2	8.8	8.5	112.0	112.2	109.5	106.2	54.92	53.51	.448	.449	50.14	50.33
20	14	112	117	141.9	150.3	10.1	10.7	112.0	113.5	126.7	132.4	72.81	76.58	.517	.509	57.85	57.73
21	15	77	42	129.7	114.9	9.3	8.2	112.0	112.0	115.8	102.6	56.58	50.60	.434	.438	48.58	49.12
21	14	180	112	118.7	124.1	8.2	8.8	112.0	112.3	106.0	110.5	51.13	53.27	.430	.423	48.18	47.52
10	5	113	21	123.5	121.3	8.8	8.7	112.0	112.0	110.3	108.3	59.90	58.24	.485	.480	54.31	53.71
21	15	580	345	99.9	100.6	7.1	7.2	112.0	112.2	89.2	89.7	29.95	30.51	.298	.303	33.41	33.95
19	14	115	92	130.3	127.9	9.3	9.1	112.0	112.5	116.3	113.7	58.91	57.31	.452	.448	50.67	50.40
14	8	28	26	115.7	133.0	8.3	9.5	112.0	112.5	103.3	118.2	55.26	60.43	.477	.454	53.40	51.10
22	16	3,930	2,513	121.5	123.2	8.6	10.1	115.0	115.6	105.7	106.6	54.37	55.81	.442	.446	50.81	51.70
Total, outside.....																	
22	16	16,175	10,821	104.1	104.9	7.4	7.8	113.4	113.6	91.8	92.3	62.54	65.60	.617	.648	69.67	73.39
Total, inside and outside.....																	

At the foot of each division of the table are shown the hours and earnings of the entire number of employees working inside and outside, respectively, and at the bottom of the table are shown the figures for all outside and inside occupations combined. A word of explanation may be needed as to how the figures in some of the columns were obtained.

The average hours actually worked were obtained by adding the hours actually worked by all employees in the occupation and dividing the sum by the number of employees in the occupation. The figures in the column headed "Average hours worked per week day" were obtained by ascertaining for each employee in the occupation the full number of hours worked by him during the period and dividing that aggregate by the number of week days in the pay-roll period. The result represents the number of hours per day that would have been worked by the employee if the work had been distributed uniformly over the week days of the pay-roll period. By dividing the sum of the hours of all employees in an occupation by the total number of employees in that occupation the average number of hours per week day in the occupation is ascertained.

By full-time hours is meant the number of hours which are regarded by employer and employee as constituting a day's work. The average full-time hours of the pay-roll period given in column 5 were obtained by multiplying the regular daily working hours in each occupation by the number of days constituting the full half-month pay-roll period. The aggregate of such hours for all the employees in each occupation was divided by the total number of employees in the occupation. The quotient is the average full-time hours of all employees in the occupation.

The average earnings actually received during the pay-roll period were computed by dividing the aggregate earnings for all the employees in each occupation by the number of employees in that occupation. As this figure includes the earnings of part-time workers as well as those of employees who worked continuously during the entire period, care should be taken not to confuse it with the full-time earnings which are shown in the last column. The average hourly earnings were obtained by dividing the aggregate hourly earnings of all the employees in an occupation by the number of employees in the occupation. The average full-time earnings is the product of the average earnings per hour and the number of hours in the pay-roll period. The figure represents the amount that would have been earned by an employee in any occupation, if he had worked the full-time hours of the occupation and received the average hourly earnings of his occupation for each hour that he worked.

Most of the information about hours and earnings contained in the table can be easily interpreted without comment. Thus the data given for blacksmiths among the inside occupations show that in 1919 they were found to the number of 30 distributed among 13 establishments; that they worked on an average 8.9 hours per week day; that while their full-time hours for the half month were 112 they actually worked during the half month an average of 124.7 hours. The average amount of money earned

by these 30 blacksmiths was \$73.56 per person, which shows earnings at the rate of 59.2 cents per hour. Any blacksmith who earned that rate per hour and worked the full-time hours of his occupation and no more would have earned during the pay-roll period \$66.26, the amount shown as full-time earnings. As the corresponding figures for 1920 are in each case put immediately beside those for 1919, an easy comparison of the two years can be made.

Attention may be called to the relative hours of contract miners and contract miners' laborers. As will be seen from the part of the table for inside employees in 1919, the 4,887 contract miners included in the survey worked on an average 6.8 hours per day, while the average of 1,855 contract miners' laborers was only 5.6 hours. It would naturally be expected that the hours of the miners would be less than those of the miners' laborers. It has been the general practice in the past for a miner to work until he has brought down enough coal to keep his laborers busy for the rest of the day and then to leave the mine. Apparently the shortage of contract miners' laborers, which has prevailed for some time, has brought about a change in the practice in this respect. This shortage of laborers may be inferred from the fact that whereas formerly each miner employed one or more laborers to load the coal that he brought down, the figures in the survey show more than two and one-half times as many contract miners as contract miners' laborers. From this it is to be inferred that a large proportion of the miners remain in the mine and load their own coal; that they spend so many additional hours in loading coal that even when their hours are combined with the shorter hours of miners who depend upon laborers to load their coal, the average for the whole group of miners is very considerably increased, and, in fact, exceeds the average hours worked by the contract miners' laborers. It is probable that the relatively short hours of the contract miners' laborers in comparison with the hours of the miners were due to the restless spirit prevailing among the laborers at the time of the survey. This restlessness caused much shifting of laborers from mine to mine and from district to district in search of working places where either better conditions could be found or more money could be made.

A glance at the similar figures for 1920 shows that the 3,188 contract miners, for whom figures are presented, worked an average of 6.6 hours per day, while the 1,191 contract miner's laborers worked an average of 5.9 hours per day. Thus it is seen that while the working time of miners has decreased two-tenths of an hour per day and that of laborers has increased three-tenths of an hour per day the relation between them found in 1919 still exists, although the difference is now reduced to seven-tenths of an hour per day.

In Table 2 are shown data similar to that in Table 1, but giving the averages of each colliery separately, for two occupations, namely, contract miners, and contract miners' laborers.

TABLE 2.—HOURS OF LABOR AND EARNINGS, BY COLLIERY, IN THE ANTHRACITE REGION IN 1920.

Occupation, establishment, and colliery.	Number of employees.	Average hours.			Average earnings.		
		Hours worked in half month.	Hours worked per week day in half month.	Full-time hours in half month.	Earnings in half month.	Earnings per hour.	Full-time earnings in half month.
<i>Contract miners.</i>							
Establishment A—							
Colliery 1.....	214	94.3	6.7	112.0	\$93.61	\$1.003	\$112.28
Colliery 3.....	162	99.0	7.1	112.0	91.23	.927	103.82
Colliery 4.....	472	94.6	6.8	112.0	86.85	.921	103.20
Establishment B—Colliery 1.....	110	103.8	7.4	112.0	89.02	.857	95.98
Establishment C—Colliery 1.....	327	84.9	6.1	112.0	69.27	.811	90.81
Establishment D—							
Colliery 1.....	117	90.8	6.5	112.0	85.81	.946	105.95
Colliery 2.....	30	108.6	7.8	112.0	88.40	.812	90.92
Colliery 3.....	131	88.3	6.3	112.0	78.26	.896	100.39
Establishment E—Colliery 1.....	121	96.0	6.9	112.0	85.49	.885	99.17
Establishment G—							
Colliery 1.....	203	99.9	7.1	112.0	79.37	.808	90.51
Colliery 2.....	150	94.0	6.7	112.0	75.25	.813	91.02
Establishment H—							
Colliery 1.....	237	65.3	4.7	112.0	57.35	.880	98.56
Colliery 2.....	212	85.4	6.1	112.0	88.92	1.039	116.32
Establishment I—Colliery 1.....	232	101.5	7.3	112.0	77.03	.770	86.30
Establishment J—							
Colliery 1.....	331	93.8	6.7	113.0	108.04	1.199	135.48
Colliery 2.....	139	93.6	6.7	113.0	111.61	1.214	137.16
<i>Contract miners' laborers.</i>							
Establishment A—							
Colliery 1.....	224	76.2	5.4	112.0	56.59	.738	82.67
Colliery 3.....	139	91.3	6.5	112.0	57.85	.632	70.80
Colliery 4.....	120	80.9	5.8	112.0	51.92	.638	71.42
Establishment B—Colliery 1.....	55	97.5	7.0	112.0	77.30	.783	87.69
Establishment C—Colliery 1.....	87	63.1	5.0	112.0	47.81	.744	83.36
Establishment D—							
Colliery 1.....	31	79.9	5.7	112.0	53.47	.662	74.16
Colliery 2.....	14	95.7	6.8	112.0	74.71	.772	86.43
Colliery 3.....	128	91.1	6.5	112.0	56.76	.627	70.24
Establishment E—Colliery 1.....	69	95.3	6.8	112.0	72.08	.761	85.20
Establishment G—							
Colliery 1.....	80	75.9	5.4	112.0	47.78	.629	70.42
Colliery 2.....	93	82.8	5.9	112.0	61.10	.730	81.81
Establishment H—Colliery 1.....	38	54.9	3.9	112.0	35.68	.644	72.09
Establishment I—Colliery 1.....	99	83.5	6.0	112.0	46.12	.570	63.85
Establishment J—							
Colliery 2.....	14	93.4	6.7	113.0	49.17	.527	59.55

In will be noticed that in this table the average hours worked per day appear very low for colliery 1, establishment H. This is caused by the fact that this colliery was operated only 10 days during the period, while in computing average hours per day the time worked by the men during these 10 days was spread over the entire 14 days.

In anthracite mines generally high earnings are found in the same mines in which short hours are worked. For example, at colliery 1, establishment A, contract miners earned an average of \$1.003 per hour and worked only an average of 6.7 hours per day, while at colliery 2, establishment D, where they earned only \$0.812 per hour, an average of 7.8 hours per day was worked. Examination of the remainder of the collieries will show that while this relation does not hold at all collieries, yet the general tendency is that the earnings per hour and hours worked per day vary in inverse proportion. As this same fact

was found to exist in the figures for 1919, it seems that this relation between high earnings and low hours is caused by something other than a temporary condition.

In the following table the collieries have been divided into two groups, those in which the contract miners averaged 6.8 hours per day or more and those at which less than 6.8 hours per day were worked. Colliery 1, establishment H, has been omitted from this table because of the fact that it was in operation only 10 days during the 14-day period.

TABLE 3.—HOURS AND EARNINGS OF CONTRACT MINERS IN 1920.

Group.	Number of collieries.	Number of employees.	Average hours worked per day.	Average earnings per hour.
Group 1.....	7	1,330	7.0	\$0.867
Group 2.....	8	1,621	6.5	.997

In the report on the investigation of the anthracite coal industry in 1919, it was pointed out that the number of contract miners' laborers was abnormally low. The figures for 1920 indicate that the shortage of such labor has become more acute. Making a comparison between 14 identical collieries, we find that in 1919 there were 3,218 contract miners and 1,402 contract miners' laborers. In that year the number of laborers was 47 per cent of the number of miners. In 1920 there were found in the same collieries 3,027 contract miners and 1,049 contract miners' laborers. The number of laborers is now only 35 per cent of the number of contract miners. Under the mining laws of the State of Pennsylvania a man who desires a certificate to work as a contract miner must have been employed at least two years as a miner's laborer. Unless the present tendency toward shrinkage in the percentage of miners' laborers is reversed in the near future, the problem of securing an adequate number of qualified miners is likely to become serious.

An examination of any of the tables already presented will show discrepancies between the hours actually worked in many occupations and the full-time hours of the occupation and corresponding differences between actual earnings for the pay-roll period and full-time earnings, or the amount that would have been earned if the employees had worked the full-time hours of the occupation. The facts as to irregularity of work are presented in Table 4. Employees in each occupation are grouped according to the percentage of full time actually worked by them. In the first part of the table the number of employees in each group is shown, and in the second part the percentage which that number constitutes of the total number of employees in the occupation.

TABLE 4.—NUMBER AND PER CENT OF EMPLOYEES WORKING EACH SPECIFIED PER CENT OF FULL TIME, BY OCCUPATION.

Occupation.	Number of establishments.	Number of employ-ees.	Number of employees working each specified per cent of full time.						Per cent of employees working each specified per cent of full time.					
			Under 25.	25 and under 50.	50 and under 75.	75 and under 100.	100.	Over 100.	Under 25.	25 and under 50.	50 and under 75.	75 and under 100.	100.	Over 100.
Inside:														
Blacksmiths.....	8	20	.....	.....	1	3	4	12	.....	.....	5	15	20	60
Brattice men.....	14	111	1	.....	12	23	9	66	1	.....	11	21	8	59
Cagers.....	16	197	1	2	19	28	14	133	1	1	10	14	7	63
Car runners.....	15	233	4	6	10	69	17	127	2	3	4	30	7	55
Door tenders (boys).....	14	156	4	2	18	63	42	29	3	1	10	40	27	19
Drivers.....	14	272	7	10	28	99	27	101	3	4	10	36	10	37
Engineers.....	14	100	2	3	5	19	25	46	2	3	5	19	25	46
Laborers.....	16	736	35	27	67	173	110	324	5	4	9	24	15	44
Laborers, company miners ¹	9	308	11	19	21	91	39	127	4	6	7	30	13	41
Laborers, consid-eration miners ¹	10	202	13	10	26	71	57	25	6	5	13	35	28	12
Laborers, con-tract miners ¹	14	1,191	125	113	215	566	96	76	10	9	18	48	8	6
Machinists.....	9	19	1	.....	.....	.....	18	.....	5	.....	3	.....	.....	95
Masons.....	6	29	.....	.....	1	9	9	10	.....	.....	3	31	31	34
Miners, company.....	11	367	13	23	33	87	54	127	12	6	9	24	15	35
Miners, consid-eration.....	10	490	16	28	77	147	131	81	3	6	16	31	27	17
Miners, contract.....	16	3,188	48	139	599	1,729	390	283	2	4	19	51	12	9
Motormen.....	15	202	3	4	6	23	3	153	1	2	3	14	1	78
Motor brakemen.....	14	178	4	5	18	31	5	115	2	3	10	17	3	65
Pump men.....	15	99	3	.....	3	17	34	42	3	.....	3	17	34	42
Timbermen.....	13	97	2	10	6	20	20	39	2	10	6	21	21	40
Trackmen.....	16	123	.....	1	4	25	19	74	.....	1	3	20	15	60
Total, inside occupations..	16	8,308	323	402	1,167	3,298	1,105	2,013	4	5	14	40	13	24
Total, mining occupations.....	16	5,736	256	332	971	2,691	767	719	4	6	17	47	13	13
Total, all other inside occupations.....	16	2,572	67	70	196	607	338	1,294	3	3	8	24	13	50
Outside:														
Ash men.....	15	53	2	.....	5	9	16	21	4	.....	9	17	30	40
Blacksmiths.....	16	39	1	.....	1	5	5	17	3	.....	3	13	13	69
Cagers.....	15	84	.....	4	3	20	4	53	.....	5	4	24	5	63
Carpenters.....	16	163	2	2	3	22	8	126	1	1	2	13	5	77
Car runners.....	10	46	.....	.....	3	19	4	20	.....	.....	7	41	9	43
Dumpers.....	16	57	1	1	1	11	9	34	2	2	2	19	16	60
Engineers.....	16	185	.....	3	3	20	62	97	.....	2	2	11	34	52
Firemen.....	16	217	1	.....	10	51	66	89	(1)	.....	5	24	30	41
Laborers.....	16	718	15	23	45	174	94	367	2	3	6	24	13	51
Loaders.....	16	142	3	3	14	25	27	70	2	2	10	18	19	49
Machinists.....	14	117	1	.....	3	4	6	103	2	.....	3	3	5	88
Oilers.....	15	42	1	1	2	7	5	26	2	2	5	17	12	62
Repair men.....	5	21	.....	.....	.....	2	9	10	.....	.....	.....	10	43	48
Timber cutters.....	14	92	3	1	3	15	6	64	3	1	3	16	7	70
Trackmen.....	8	26	.....	.....	2	4	2	18	.....	.....	8	15	8	69
Outside breaker:														
Jig runners.....	12	54	1	.....	.....	7	18	28	2	.....	.....	13	33	52
Plate men.....	14	112	.....	2	3	31	15	61	.....	2	3	28	13	54
Slaters (boys).....	15	345	9	13	32	131	95	65	3	4	9	38	28	19
Total, outside occupations..	16	2,513	40	53	133	557	451	1,279	2	2	5	22	18	51

¹ Less than one-half of 1 per cent.

An examination of the table brings out the fact that a very small percentage of the employees in either outside or inside groups worked exactly full time. Of all inside employees in anthracite mines 13

per cent are recorded as working full time and no more, while of all outside employees the corresponding number is 18 per cent. If the figures for the miners and the miners' laborers, that is, the employees who are engaged directly in mining and getting out the coal, are segregated and compared with the figures for the remaining employees of the mine, an interesting situation is revealed. It is found that of the 5,736 miners and miners' laborers only 26 per cent worked full time or over, whereas of all the employees in the remaining inside occupations 63 per cent worked full time or over and in outside occupations 69 per cent are found in the same class. The largest group of miners and laborers, constituting 47 per cent of the entire number, is found in the class which worked between 75 per cent and 100 per cent full time, while only 24 per cent of laborers in other inside occupations and 22 per cent of laborers in outside occupations are in that group. Further computation would show that the 5,736 miners and miners' laborers worked on the average 81.5 per cent of full time, while the 5,085 employees in other occupations, inside and outside, worked 104.2 per cent of full time.

The following table of index numbers shows the effect upon the wages of contract miners of the various wage increases that have been granted since 1913. The contract rates in effect in 1913 have been used as the base, and to this have been applied the successive increases.

Relative wage rates of anthracite contract miners.

1913.....	100.0
1914.....	100.0
1915.....	100.0
1916.....	107.0
1917, May.....	117.7
1917, December.....	133.8
1918, November.....	149.8
1919.....	149.8
1920.....	149.8

The first increase after 1913, amounting to 7 per cent on tonnage rates, was granted on May 5, 1916, making the index number 107.

Since 1916 three new voluntary agreements have been entered into, each of which provided an increase in rates. These agreements unlike those of former years, gave a percentage increase on the earnings which should be made instead of a rate increase.

By these agreements the rates in effect in 1916 have been maintained and all increases have been applied to earnings made at these rates. Thus the agreement effective May 1, 1917, provided for the addition of 10 per cent to the gross earnings of each miner at the rate in effect in 1916; this was replaced by an increase of 25 per cent on December 1, 1917; and finally on November 15, 1918, the latter increase was replaced by an increase of 40 per cent on the gross earnings at the 1916 rate. Under these last three agreements it will be seen that the net increase in miner's rates above the 1913 base has been 17.7, 33.8, and 49.8 per cent, respectively.

The agreement of November 15, 1918, automatically expired on March 31, 1920, and a new agreement is now being negotiated.

Increases in Rates of Wages in Bituminous Coal Mines.

IN THE MONTHLY LABOR REVIEW for December, 1919, (p. 227) there was published a table showing the relative increases in the rates of wages of inside employees in the bituminous coal mines in the Hocking Valley district of the Central Competitive Field from 1913 to 1917.

Since those figures were published there have been two changes in the rates in question. The first was the award of the Fuel Administrator in November, 1919; the second, the award of the Bituminous Coal Commission, which replaced the award of the Fuel Administrator and took effect April 1, 1920. The conditions prevailing and the circumstances leading up to these awards were discussed in the MONTHLY LABOR REVIEW for December, 1919 (pp. 61-78), and for April, 1920 (pp. 40-50).

The following index numbers show the relative increases in this district, from 1913 to 1920, including the effect of the awards by the Fuel Administrator and the Coal Commission.

The rates in force in 1913 have been used as the base, and are represented by 100. Occupations which were paid the same rate in 1913, and which have received identical increases since, have been grouped together.

The index numbers for occupations paid on a tonnage basis are based on the rate per ton for mine-run coal. In 1913 the rate per ton was given for screened coal; this rate has been converted to a mine-run basis by assuming that screened coal constituted 65 per cent of mine-run coal.

In computing the relative for all inside occupations combined, the index number for each group was weighted by the number of employees found in that group on the pay rolls of the companies in the Hocking Valley district visited by agents of the Bureau during the Industrial Survey of 1919. The sum of the weighted numbers was then divided by the aggregate of the weights, and the relative for the final group "All occupations combined" was thus obtained. This relative shows the average increase of all inside occupations.

It should be stated that the most recent increase in wages yields the inside employees collectively 29.7 per cent over the rates established in November, 1917. The average of the outside employees, however, is considerably lower than this figure and if weighted in a manner similar to that used for inside employees and then combined with the inside employees, the general average increase for all employees, inside and outside, would be the 27 per cent which has been announced as the increase granted.

INDEX NUMBERS OF RATES OF WAGES OF INSIDE EMPLOYEES IN BITUMINOUS COAL MINES IN THE HOCKING VALLEY DISTRICT.

(Rates for 1913=100.)

Occupation group and year.	Index number.	Weight number.	Occupation group and year.	Index number.	Weight number.
1. Machine mining—Cutters and loaders:			5. Trappers (boys):		
1913.....	100.0	6,878	1913.....	100.0	120
1914.....	104.8		1914.....	100.0	
1915.....	104.8		1915.....	100.0	
1916.....	111.5		1916.....	106.1	
1917, April.....	133.8		1917, April.....	143.9	
1917, November.....	156.1		1917, November.....	200.8	
1918.....	156.1		1918.....	200.8	
1919.....	177.9		1919.....	228.8	
1920, April.....	209.6		1920, April.....	240.9	
2. Hand mining—Pick miners:			6. Cagers, drivers, haulers, motormen, timbermen, tracklayers, trip riders, and wiremen:		
1913.....	100.0	1,872	1913.....	100.0	1,913
1914.....	104.0		1914.....	100.0	
1915.....	104.0		1915.....	100.0	
1916.....	104.1		1916.....	104.9	
1917, April.....	119.4		1917, April.....	126.8	
1917, November.....	134.8		1917, November.....	176.1	
1918.....	134.8		1918.....	176.1	
1919.....	153.7		1919.....	200.7	
1920, April.....	171.8		1920, April.....	211.3	
3. Tracklayers' helpers:			All groups combined:		
1913.....	100.0	440	1913.....	100.0	-----
1914.....	100.0		1914.....	103.6	
1915.....	100.0		1915.....	103.6	
1916.....	105.0		1916.....	108.8	
1917, April.....	127.9		1917, April.....	130.0	
1917, November.....	181.3		1917, November.....	157.6	
1918.....	181.3		1918.....	157.6	
1919.....	206.9		1919.....	179.6	
1920, April.....	219.5		1920, April.....	204.4	
4. Pipemen:					
1913.....	100.0	110			
1914.....	100.0				
1915.....	100.0				
1916.....	105.0				
1917, April.....	126.6				
1917, November.....	177.0				
1918.....	177.0				
1919.....	201.8				
1920, April.....	213.0				

From the table it is seen that the different groups have had percentage increases that fall within a comparatively narrow range, with the exception of trapper boys and pick miners.

The large increase for trapper boys seems to be justified by the very low rate that they have been receiving for many years. The reason for such a wide difference in the percentage of increase between pick miners, with an increase of 71.8 per cent, and machine miners, whose increase has been 109 per cent, is not very clear, especially as in 1919 machine miners in the Central Competitive Field made average earnings of \$1 per hour, while hand miners in the same territory averaged only \$0.81 per hour.

The most apparent effect is that the payment of so much higher rates to machine miners will probably induce a large number of hand miners to become proficient in the use of mining machines. It would seem, however, that any such additional increases for machine miners beyond a certain point will ultimately make this style of mining less profitable and consequently less desirable to the operators than the old hand-mining method, and will cause them to hesitate in the installation of the expensive machines required. When this point is reached, the operators will be compelled to adopt the stand

that the miners have occupied since the first installation of mining machines, that of a preference for hand mining as opposed to machine mining. Just how much excess of labor cost machine mining can carry is problematical, but it is easily seen that if machine miners continue to receive increases in excess of those granted to hand miners, the point will be reached where machine mining will cease to be as profitable as hand mining. The rate paid under the last award for machine-mined coal in this district is \$0.94 per ton, while for hand-mined coal the rate paid per ton is \$1.116.

Decision of Kansas Court of Industrial Relations as to Wages on Interurban Railways.

THE Court of Industrial Relations of the State of Kansas announced on April 23 its findings in a case involving all classes of employees of the Joplin & Pittsburg Railway Company of Kansas and Missouri. The complainants were 158 members of a local union composed entirely of employees of the railway. The company operates an electric interurban road, carrying freight and passengers between various points in Kansas and extending also to Joplin, Mo. This necessitated the decision of a contention raised by the company that the court had no jurisdiction on account of the interstate character of the business, which would place the company exclusively under the provisions of the Federal transportation act of February 28, 1920.

This contention was decided adversely to the company, and it was permitted to answer as to the complaints of its employees. It first alleged a contract dated August 1, 1914, to run for six years, which it held to be in full force and controlling the subject of wages. It also denied that there was any controversy endangering or likely to endanger the operation of its business, and further alleged its financial inability to pay a higher wage. A large amount of evidence was taken, and it appeared that within recent years a strike of 80 days had occurred, paralyzing the business, and entailing a loss to the company of more than \$68,000. A similar strike of nearly one-half the same duration occurred later. Besides the loss to the company, there was the wage loss to the men and great economic waste in that portion of Kansas and Missouri served by the company. A wage controversy had been submitted to the joint chairmen of the War Labor Board, and a decision was rendered by them on July 31, 1918. This fixed the rate per hour for shopmen, barn men, motormen, and conductors. The least skilled labor of a mechanical nature was paid 42 cents per hour, while motormen and conductors began at 38 cents, and after one year's service were to receive 42 cents. A higher wage was paid to machinists, painters, and armature winders, being 51½ cents per hour. This award was to continue for the duration of the war, with right to ask for adjustments not sooner than six months after February 1, 1919. Since the War Labor Board had gone out of existence, the complainants referred their case to the State industrial court, while the company relied on the contract of August, 1914.

The court held that the contract of 1914 was not effective, and took into consideration the various elements involved in the case. Among these was considerable variety in skill and responsibility necessary for the performance of the various duties of the employees under consideration. The increase in cost of living was such that some of the workmen were unable to support their families without getting into debt or drawing on previous savings. Some did additional labor after having performed a full day's work at their regular employment. Reference was made in the opinion to the decision in the Topeka Edison Co. case, noted in the May REVIEW (pp. 52-54), as to the rights of workingmen to procure for themselves and their families "all the necessities and a reasonable share of the comforts of life." The factors to be considered, as wages in the locality for like work, cost of living, skill, degree of responsibility, character of employment, and qualifications of the individual employee were enumerated, as in the earlier case.

A serious difficulty was found to exist in the lack of financial ability of the employer. It was pointed out, however, that the court had recently authorized an increase in the charges of the company which would probably considerably increase its earnings. The duty of the court to permit a fair return was touched upon, but it was declared "that wages to labor should be considered before dividends to the investor, and that a business which is unable to pay a fair rate of wage to its employees will eventually have to liquidate." The industry was said to be essential, but its conduct necessitates the payment of such wages as would retain competent services. The situation was held to involve a threat of industrial strike, disorder and waste. It was felt, therefore, that the court should establish a wage scale, which was, however, restricted "to such employees of the respondent as are actually bona fide residents of the State of Kansas, and whose work is located wholly or principally within said State." The scale was to come into effect on the 1st day of May, 1920, and to continue in force for a period of six months, or until changed by agreement of the parties with the approval of the court. The following is the new wage scale:

Motormen and conductors:

First 3 months.....	45 cents per hour.
Next 9 months.....	48 cents per hour.
Next 12 months.....	51 cents per hour.
After 2 years.....	55 cents per hour.
Blacksmiths.....	55 cents per hour.
Blacksmith helpers.....	45 cents per hour.
Machinists.....	60 cents per hour.
Machinist helpers.....	45 cents per hour.
Carpenters, first class.....	55 cents per hour.
Carpenters, second class.....	48 cents per hour.
Painters.....	55 cents per hour.
Painters' helpers.....	45 cents per hour.
Pitmen.....	55 cents per hour.
Pitmen helpers.....	45 cents per hour.
Armature winders.....	60 cents per hour.
Armature winder helpers.....	45 cents per hour.
Car cleaners.....	45 cents per hour.
Headlight, tail-light and telephone men.....	\$135 per month.

All of said wages to be on the same basis heretofore existing as to hours of labor and overtime.

Rise of Wages in British Industries.

WHILE no serious stoppage of work has actually taken place since the railway strike of September, 1919, with the exception of the less disturbing molders' strike ending in January, there have been numerous threats of such calamities and in two instances at least strikes have been narrowly averted through the tactful and dexterous handling of the situation by the Government. In recent weeks the scramble for increases in wages has become more acute—each industry watching every other industry's efforts with apprehension lest its own advances should be surpassed by those granted to other workers.

It has become increasingly apparent also that the life of an agreement is to the last degree precarious. This is forcefully illustrated by the most recent demand of the railway men, noted elsewhere in this article, which was promulgated exactly five days after the final signing in March of the agreement arrived at in January. (See MONTHLY LABOR REVIEW, March, 1920, pp. 16-25.)

The dockers' success in winning a favorable report (See MONTHLY LABOR REVIEW, May, 1920, pp. 54 to 62) from the court of inquiry regarding their demand for a 16 shilling (\$3.89, par) per day minimum particularly seems to have incited other industries whose workers have perhaps felt superior to dock laborers as a class and who therefore did not view with equanimity the advances recommended for the dockers. Dr. Arthur Shadwell has recently said that the fact that dock labor is in a very large proportion uncertain labor—

* * * is entirely overlooked in the claim that other industries not subject to the same disabilities are entitled to the same treatment as dockers. Railway men, in particular, enjoy the great benefit of regular, assured, and permanent employment. The comparison is therefore fallacious, and furnishes no justification for tearing up a recent agreement concluded with all solemnity and infinite pains.

But I fear that reason and equity have nothing to do with the systematic pushing of alternate claims, which resembles a game of endless leapfrog. It has long been evident that there is in the background a concerted plan of campaign for making it impossible to carry on certain large industries by a ceaseless series of progressive demands. The object is to bring about the collapse of the "capitalist system," which is the first step toward the millenium. Agreements are merely obstacles to be ignored or smashed. And the worst of it is that those trade-union leaders who are honestly trying to get justice for the men and to keep the peace are sacrificed with the agreements they have concluded. They are placed in a humiliating and, indeed, impossible position. Their work is no sooner done than it is undone and has to be begun again.

During March and April, the following advances were agreed upon:

Engineering and shipbuilding trades, 3 shillings (73 cents, par) a week on April 1, and 3 shillings on June 1.

Miners, 20 per cent, with a minimum of 2 shillings (48.7 cents, par) a day.

Railway shopmen, 6 shillings (\$1.46, par) a week.

Road transport workers, 5 shillings (\$1.22, par) a week.

Agricultural laborers, 4 shillings (97.3 cents, par) a week.

Timplate and steel workers, 40 per cent.

Dockers, minimum of 16 shillings (\$3.89, par) a day.

The following claims are under negotiation:

Cotton operatives, 60 per cent on current rates.¹

¹ This was reduced to 35 per cent on Apr. 29, but the employers would offer 25 per cent only.

Tramway workers, 10 shillings (\$2.43, par) a week.

Omnibus workers, 10 shillings (\$2.43, par) a week.

Builders (London), 1 shilling (24.3 cents, par) an hour.

Postal workers, equivalent of prewar wages, with addition of 10 shillings (\$2.43, par) a week.

General workers, £1 (\$4.87, par) a week.

Shop assistants, at least 25 per cent.

Railway men, £1 (\$4.87, par) a week to all grades.

The Labor Gazette for April gives an account of the increase in rates of wages in the chief industries of the United Kingdom, from July, 1914, to the end of February, 1920. The percentages of increases would, of course, be considerably enhanced had they included the advances of March and April, 1920, noted above. The following is a summary of the Gazette's statement:

There is still a wide diversity between the increases granted to various classes of workers as regards both the actual advance in weekly wages and the percentage increase on prewar rates. In some cases, notably among skilled workmen in industries where the same flat rate advance has been applied to all adult workmen, the increase up to the end of February last was equivalent to only about 100 per cent, or less in some cases, on the prewar rate. On the other hand, in some other cases, particularly among the lower-paid grades in the same industries, the advances are equivalent to as much as 170 or 180 per cent on the prewar rates. While the information in the possession of the department is not sufficiently complete to enable the average percentage increase for all industries and occupations to be calculated exactly, it is estimated, on the basis of the available data, that the average increase in weekly wages up to the end of February, 1920, was about 120 to 130 per cent on the prewar rates. As the length of the working week has been considerably reduced in the same period, the usual range of working hours in industry generally being about 44 to 48 weekly, as compared with 48 to 60 before the war, the percentage increase in hourly rates would be substantially greater.

Miners.

THE Miner's Federation of Great Britain, early in December last, as a preliminary to an appeal to Parliament, undertook a vigorous campaign of propaganda for nationalization of the coal mines, basing their plea on the majority report of the 1919 Sankey Coal Commission, but they did not succeed in winning over public opinion to any great extent, and when on February 11, at the opening of the present session, a Labor member presented the case to Parliament, the result of the "division" of the House was 64 for and 329 against nationalization.

A month later a special trades-union congress rejected by a decisive majority (nearly 4 to 1) a resolution in favor of trade-union action (a general strike) to compel the Government to nationalize the mines. The miners' and engineers' unions made up nine-tenths of the vote in favor of a strike. At this time Mr. Smillie, the miners' president, and for many years their real leader, retired from active leadership on the plea of ill health, leaving Mr. Hodges, secretary of the federation, in aggressive control. The miners having been defeated in their move before Parliament, and not having gained the support of their fellow trade unionists to their proposal to launch a general strike, now presented to the Government a demand for an immediate increase of wages of 3 shillings (73 cents, par) per day for all adult members of the federation, and half that amount for boys under 16

years of age. The Government declined to accede to this demand, but made alternative offers as follows:

1. A flat rate advance of 1s. 6d. (36.5 cents, par) a shift for men and 6d. (12.2 cents, par) for boys; or
2. An increase of 20 per cent on the gross wages, excluding the war bonus and the "Sankey wage" (granted in 1919).

A series of conferences resulted in the Government's amended offer standing as follows:

An advance shall be granted of 20 per cent on gross earnings (exclusive of war wage and Sankey wage), so, however, that no person of 15 years or upward shall receive a less advance than 2s. [48.7 cents, par] per shift worked or per day worked, no person under 18 years of age but not under 16 years of age a less advance than 1s. [24.3 cents, par] per shift worked or per day worked, and no person under 16 years of age a less advance than 9d. [18.3 cents, par] per shift worked or per day worked. The advance shall apply to all classes of colliery workers employed in coal mines, or at the pithead of coal mines, whose wages have hitherto been regulated by the movement of wages in the coal mining industry, and shall take effect on and from March 12, 1920.

The federation officials decided to submit this offer to a vote of their members, and on April 16 the result was announced; 442,704 members had voted for acceptance of the Government's offer, while 377,569 had voted for a strike to enforce the original demand. The new terms, therefore, were accepted, and the first payment under them was made at the April 30-May 1 pay day. The advance is retroactive from March 12. The estimated cost of the concession is about £30,000,000 (\$145,995,000, par) per annum, and it is probable that an advance in the price of coal will soon be made to meet this cost.

During the discussion of the miners' demand it developed that public opinion quite generally admitted the justice of an increase to miners in view of recent advance made to other workers, noticeably the engineers and railway men, but equally generally considered 3s. (73 cents, par) a day an exorbitant demand.

Statistics relating to miners' wages are conflicting and many of the calculations are made on contentious data. Mr Hodges is reported to have stated that the average wage per person employed in the mining industry in 1914 (including boys) was 6s. 6d. (\$1.58, par) per shift. By the operation of the sliding scale which regulated wages according to selling prices of coal and by war wages granted in 1917 and 1918 the average wage per day was about doubled, and in 1919 the Sankey Coal Commission recommendation of 2s. (48.7 cents, par) per day increase was granted. The average number of shifts per week worked by the miners is said to be a little over 5. By using an even 5 the average weekly rates of wages, roughly, would be:

	£	s.	d.
1914.....	1	12	6 (\$7.91, par).
1918.....	3	5	0 (\$15.82, par).
1919.....	3	15	0 (\$18.25, par).

The miners asked for 3s. (73 cents, par) per shift increase, which would have resulted in an average weekly rate of about £4 10s. (\$21.90, par), a figure somewhat higher than the reported average wage of a fitter or turner in the engineering trade, namely, £4 7s. (\$21.17, par) a week. It should be remembered, moreover, that in the first instance the average wage included the wages of boys.

The following comparative statements taken from the London Times would indicate that up to the time of this settlement in the matter of weekly advances the miner had fallen behind the engineer, the weekly advances since 1914 being as follows: ²

Miners:	
Under sliding scale (approximately 3s. a shift).....	15s. 0d.
War wages (1s. 6d. a shift in 1917 and 1s. 6d. in 1918, six payments for 5 shifts).....	18s. 0d.
Sankey wage (2s. a shift worked).....	10s. 0d.
Total	£2 3s. 0d.
Engineers:	
Up to April, 1917.....	7s. 0d.
April, 1917.....	5s. 0d.
August, 1917.....	3s. 0d.
December, 1917.....	5s. 0d.
August, 1918.....	3s. 6d.
December, 1918.....	5s. 0d.
December, 1919.....	5s. 0d.
March, 1920.....	6s. 0d.
Total	£1 19s. 6d.

In addition, the engineer has a war bonus of $12\frac{1}{2}$ per cent on his total earnings (awarded October, 1917). Before the war the skilled engineer's rate was over 38s. (\$9.25, par) per week, hence with the advances noted it is now some 87s. (\$21.17, par), or a raise of 49s. (\$11.92, par), approximately, against the miners' 43s. (\$10.46, par). When the miners presented their demand of 3s. (73 cents, par) per shift to the Government, the prime minister declared that if the demand were conceded it "would knock the whole wage system of the country absolutely endways because it could not possibly end with the miners." The settlement of a guaranteed minimum advance of 2s. (48.7 cents, par) per shift gives the miners a total advance of 53s. (\$12.89, par) per week over prewar rates, and the effect upon the engineers who only get an advance of 49s. (\$11.92, par) per week, including their recent raise of 6s. (\$1.46, par) can not be foretold. In this connection it may be noted that the minority report of the Dockers Court of Inquiry (see MONTHLY LABOR REVIEW for May, 1920, pp. 54-62) quotes this remark of the prime minister in voicing the objection of its signers to the 16s. (\$3.89, par) minimum recommended for dockers.

Railwaymen's New Demands.

THE railwaymen's standardization of wages agreement ³ with the Government, embodying a sliding scale arrangement based on the cost of living, which was effected last January, was completed and signed on March 20. But whatever feeling of satisfaction and security may have accrued to the public thereby was of short duration, for on March 25 Mr. J. H. Thomas, the general secretary of the National Union of Railwaymen, wrote to Sir Eric Geddes, minister of transport,

² Value of £1 at par, \$4.866; 1s., 24.3 cents; 1d., 2 cents.

³ See MONTHLY LABOR REVIEW, March, 1920, pp. 16-25.

inclosing the following resolution "unanimously passed" by his executive committee:

That this executive committee having taken into consideration the effect of the sliding scale on the wages of our members and recognizing the serious position they are placed in from a wages point of view in relation to other industries, decides immediately to approach the Minister of Transport with the object of reviewing the position.

Following this letter a series of demands and amended demands were made to the Central Wages Board,³ culminating April 6, when the National Union of Railwaymen applied to the board for an increase of £1 (\$4.87, par) a week to all their members covered by the national settlement, with a further explanation the following day that locomotive men, whose wages had been standardized in August, 1919, were included in this demand, and that all previous demands were cancelled.

The Central Wages Board held meetings on April 9 and 13, and, according to the Railway Review of April 16, agreed that in accordance with the sliding scale locomotive men whose wages were fixed in August, 1919, when the cost of living was 115 per cent above normal should receive advances of—

One shilling (24.3 cents, par) a week from November, 1919, when the cost of living was 120 per cent above normal.

A further 1s. a week from December, when the cost of living increase was 125 per cent.

A further 1s. a week from March, 1920, when the cost of living increase was 130 per cent.

It was also agreed that other grades (than locomotive men) under the agreement effected in January should be granted an increase of 1s. a week owing to the increase above normal of 5 per cent in the cost of living, from 125 to 130 per cent.

The consideration of the demand of £1 (\$4.87, par) a week increase was postponed until another meeting to be held if possible before the end of the month.

It was further agreed that as a special case the board should meet again when the statistics as to the cost of living on May 1 should be available. This departure from the exact terms of the agreement (a review every three months) was understood to be entirely exceptional and due to the rise in the price of bread (from 9d. to 1s. (18.3 cents to 24.3 cents, par) for a 4-lb. loaf) on April 12 owing to the Government's partial withdrawal of the bread subsidy on April 1. This rise in prices, it was held, is not an ordinary market fluctuation.

The National Wages Board, which is the court of appeal from the decisions of the Central Wages Board, has held a meeting to discuss matters of procedure, and it is probable that the £1 (\$4.87, par) demand will be referred to it later on.

Mr. C. T. Cramp, the industrial secretary of the National Union of Railwaymen, in the course of a speech on April 18, as reported in the press, said:

The position of our latest demand for an increase on the standard rate is not generally understood. We made a settlement early this year which standardizes the conditions of railwaymen all over Great Britain, and the case of Ireland is now being considered. Within that settlement was a provision for a sliding scale based on the cost of living, as shown in the figures set out in the Board of Trade Labor Gazette, but that particular question must not be confused with the £1 [\$4.87, par] demand. Although the settle-

³ See MONTHLY LABOR REVIEW, March, 1920, pp. 16-25.

ment is of comparatively recent date, it must be remembered that it was accepted by a delegate meeting under protest, those words being explicitly included in the resolution, and it was only with the idea of obtaining the principle of standardization that they were accepted at all.

Now that we have settled the principle so far as standardization of conditions is concerned, we deem it a right thing to make a demand to raise the standard rate. The acceptance of the Government's offer to the miners gave an increase of 2s. [48.7 cents, par] a day. The recommendation of the industrial court, which inquired into the dockers' conditions, will involve a standard rate of 16s. [\$3.89, par] a day. When we made a settlement for locomotive men last August it was made, not merely on the cost of living which then obtained, but was intended to be a just recognition of the skill and responsibility which is possessed by locomotive men, and precisely the same in the other grades, except that we never considered they obtained what they were entitled to.

Now that these changes are taking place in connection with wage rates in other industries it is clearly the duty of railwaymen to see that their rates are also advanced, and that is why the £1 [\$4.87, par] increase is asked for. That is why it will be resolutely pushed forward. You can not in these days separate one industry from another in a way that was possible a few years ago. Negotiations become national and public. Parliament is always interested, and when the working classes realize that all questions of wages and hours affecting large industries are matters of national concern, they naturally desire that the standard of life shall, as far as possible, be equalized as between the various sections.

The acceptance of the January agreement "under protest," noted above, may be quoted later on by the miners who accepted the Government's offers on April 16 in accordance with a rather narrow majority vote of their members. In fact evidences of dissatisfaction have already appeared in Wales and other mining sections.

Mr. Cramp's statement that the locomotive men's settlement in August, 1919, was made not merely owing to the cost of living which then obtained but was intended as a recognition of the skill and responsibility of the men, is along the lines followed by the industrial court in establishing the amount of the award to the engineering trades in March. The court expressed the views that while during the exceptional circumstances of the war it was proper to take into account the cost of living as the principal determinant of wages, other considerations now arise. They held that the remuneration of the workpeople should, now that the war is over, depend on the value of the work done, that the value of the work done depends on the state of the market and that the market for engineering products at this time is in a state of exceptional activity, hence they decided upon an advance of 6s. (\$1.46, par) a week, one-half to become due on April 1 and one-half on June 1.

London Building Trade Operatives.

A FURTHER hindrance to meeting the very acute housing shortage in London was forecast on April 14, when the London District Council of the National Federation of Building Trade Operatives sent to the London Master Builders' & Allied Industries Association a formal four months' notice to terminate the agreement on working rules which was made between the two bodies last February.

The agreement as it stands provides that subject to certain exceptions the standard rates for skilled building-trade workers shall be (as of May 1) 2s. 0½d. (49.7 cents, par) an hour and for laborers 1s. 9d. (42.6 cents, par). The new rates which if granted would come into force on August 15 are stated to be 3s. (73 cents, par) an hour

and 2s. 9d. (66.9 cents, par) per hour, respectively. As the agreed working hours for builders are 46½ a week in summer and 44 in winter the new demand would amount, if conceded in full, to an addition of over £2 (\$9.73, par) a week to the wages of the workers.

A London builder commenting on this demand in a letter to the Times says:

* * * the cost of houses to be erected under the various "housing schemes" in the metropolitan area has been ascertained to be about £1.150 [\$5,596.48, par] per house at present prices. Half of this cost may roughly be taken to be for materials and half for labor. With this 50 per cent increase of wages the additional cost per house will be some £280 [\$1,362.62, par], making a total of £1.430 [\$6,959.10], but as there will doubtless be a sympathetic advance in cost of materials it would not be unreasonable to anticipate that the eventual cost of each house may reach £1.600 [\$7,786.46, par]. The county council proposes borrowing the money to pay for these houses at 5½ per cent. The economic rent, therefore, would seem to work out at £92 \$447.72, par] per annum.

Dockers' Agreement.

AT A meeting of the negotiating committees of the National Council of Port Labor Employers and of the National Workers' Federation held in London on April 19, 1920, the port employers agreed to accept "as a whole" the majority report of the Dockers' Court of Inquiry, a summary of which appeared in the May, 1920, issue of the MONTHLY LABOR REVIEW (pp. 54 to 62). The workers had previously accepted the report, and at this meeting it was further agreed that a joint committee of both sides should be set up to work out and settle the following essential details arising out of the report:

1. To whom does the report apply—(a) grades of men and (b) ports.
2. Settlement of differentials.
3. Basis of revision of piecework rates.
4. Safeguards—observance of hours of working and other agreements.

At the close of the conference the following further statement was issued by the committees:

Points of difference arising thereafter on the definition of grades and sections of workers, and details of working and in the actual carrying out of the agreement to be settled by submission to an independent arbitrator, agreed upon between the parties, his decision to be final, and accepted by both sides, or by some other effective method to be mutually agreed upon, the object in view being the stoppage of sectional strikes.

The Times (London) of April 20 comments as follows:

Stress should be laid on the fact that the employers have accepted the majority report "as a whole." The dockers' representatives signed it, and the Transport Workers' Federation accepted it "as a whole." The point is important, for the report was as much a report on output as on wages. It recommended the establishment of a national minimum wage of 16s. [\$3.89, par] a day, but it made this recommendation "on the footing that the hopes held out on behalf of the men of increased output shall not be frustrated." One of the questions referred to the new joint committee is "safeguards—observance of hours of working and other agreements." It would be invidious, in view of the admirable temper which has so far prevailed on both sides, to attempt to prejudice the decisions of the joint committee on this question. But the dependence of the new minimum wage on good timekeeping and conscientious work should be kept in mind at every stage in the negotiation of what has been called the "dockers' charter."

Greater Output in Industry.

THE British Government has set up a committee with the following terms of reference: "To consider and advise as to the best means of securing the greatest possible production consistent with the permanent well-being of industry and of the employers and the workpeople engaged therein." The committee consists of an independent chairman, two employers, two labor representatives, and two Government representatives, all of these being "permanent," and in addition there will be two representatives appointed by the employers and two by the workpeople to represent any particular trade which may be under consideration by the committee. The trade representatives will leave the committee when the inquiry has been completed so far as regards their particular trade and representatives of other trades will take their places.

The ministry of labor after consultation with the National Confederation of Employers' Organizations and with the parliamentary committee of the Trades-Union Congress appointed the "permanent" members of the committee, and is now in communication with the National Industrial Council for the Building Trade, which is the first trade to which it is proposed to give consideration regarding the appointment of "temporary" representatives to act during the time of such consideration.

The chairman of the committee is Sir Stephenson Kent, K. C. B., director general of munitions labor supply, 1916-1918, and controller general of civil demobilization and resettlement, 1918-19, who came to America on a Government mission in 1917.

MINIMUM WAGE.

Minimum Wages for Hotel and Restaurant Workers.

District of Columbia.

AN ACCOUNT of the conference called by the Minimum Wage Board of the District of Columbia to meet on February 3, 1920, for the purpose of recommending a minimum wage for women employees in hotels and restaurants, apartment houses, clubs, and hospitals, was given in the March issue of the *MONTHLY LABOR REVIEW* (pp. 132-136). Subsequently the board issued an order (M. W. B. Order No. 4), dated March 26, effective May 26, fixing the amount recommended by the conference, namely \$16.50 per week, as the minimum wage for the workers affected. The text of the order is as follows:

The Minimum Wage Board of the District of Columbia does hereby order that—

1. No person, firm, association, or corporation shall employ a woman or minor girl in any hotel, lodging house, apartment house, club, restaurant, cafeteria, or other place where food is sold to be consumed on the premises or in any hospital, at a rate of wages of less than $3\frac{1}{4}$ cents per hour, \$16.50 per week, or \$71.50 per month. This shall not be construed to include nurses in training.

2. When bona fide meals are furnished by the employer to any woman or minor girl employed in the establishments named in section 1 of this order as part payment of the wages of such employee, not more than 30 cents per meal may be deducted by such employer from the weekly wage of such employee. A record shall be kept of the number of meals furnished each woman and minor girl per week and of the deductions made from the weekly wage for the same; otherwise the full minimum wage rate shall be paid in cash.

3. When lodging is furnished by the employer to any woman or minor girl employed in the establishments named in section 1 of this order as part payment of the wages of such employee not more than \$2 per week shall be deducted by such employer from the weekly wage of such employee.

4. Tips and gratuities shall not be construed as part of the legal minimum wage. This order shall become effective sixty (60) days from date hereof.

Saskatchewan.

THE Minimum Wage Board of Saskatchewan has issued as its fourth order regulations governing female employees in hotels, and refreshment rooms.¹ The order fixes the maximum hours of labor at 48 per week unless by special permission in writing. No work period is to end between 12 midnight and 7 a. m. The minimum wage for experienced workers is \$14 per week, a three months' learning period to be permitted at a rate not under \$12 per week. No female under 16 is to be employed, nor any female under 18 to work after 8 p. m. Records of names, hours worked, and wages earned are to be kept. Meals are to be reckoned at not more than \$5.25 per week for 21 meals, and where lodging is furnished, \$2.50 is the maximum charge for full seven days. If aprons or caps are required, they must be furnished, laundered, and kept in repair by the employer. The customary regulations as to cleanliness, drinking water, lighting, ventilation, toilet rooms, wash basins, etc., are embodied in the order.

¹ Earlier orders were noted in the *MONTHLY LABOR REVIEW* for December, 1919, p. 266.

COOPERATION AND PROFIT SHARING.

Aims and Possibilities of the Consumers' Cooperative Movement.

By FLORENCE E. PARKER.

THE consumers' cooperative movement is one of vast possibilities—possibilities, however, which have as yet scarcely begun to be realized. The movement is growing rapidly, but it will reach its greatest opportunity for development only when it controls the sources of its supplies. Under the present system of distribution, the retail cooperative store is absolutely dependent upon the wholesalers, jobbers, manufacturers, and producers, all operating on the profit basis to which the cooperative movement is opposed. Cooperative leaders have long understood this difficult position and have looked forward to the cooperative undertaking by the consumers, step by step, of the successive stages—wholesaling, manufacture, transportation—backward toward and including the primary source of supply, the land. They hope for the time when cooperation will be substituted for competition and the needs of man, economic and social, will be supplied, not for profit but for use, by the organized consumer. This is an ambitious program, but the program of the movement, though not often formulated, has always been ambitious. The original Rochdale pioneers with their tiny shop in Toad Lane aimed to do no less than “proceed to arrange the powers of production, distribution, education, and government; or, in other words, to establish a self-supporting home colony of united interests.”

Because of its inherent possibilities, and because of the fact that it is being recognized more and more as a means of relief from our present industrial and economic ills, the cooperative movement deserves consideration. Under these circumstances it becomes important to know whether, and if so in what way, the cooperative is an improvement on the competitive system; whether the movement is capable of performing all those social and industrial functions that it is its avowed aim to undertake; what is the position of labor in the system; and what the universal application of the system would involve. It is impossible, of course, to review the subject exhaustively in a short article, but an attempt is made here to touch briefly upon the important points.

Democratic Aspect of Cooperation.

THE first claim to favorable consideration made by the cooperative movement lies in the fact that cooperation is the embodiment of industrial democracy. Membership is voluntary and open to all. Shares are of low denomination and may usually

be paid for in installments. At meetings each member has one vote and no more, regardless of the amount of stock held. In order to insure comparative equality in the financial status of members, the number of shares that may be held by any one member is limited. Capital receives interest at no more than a legal rate, it being the cooperator's idea that the owner of capital should receive a fair price for the use of his money, but no more than a fair price. The possessor of a great deal of money therefore has no more power in the affairs of the society and no higher status than his poorer fellow member. In the cooperative movement all are on the same footing. It has been said that the motive power of the movement is the man and not his money, and this principle is logically extended to every part of the movement, federations as well as retail societies. No financial group can obtain a controlling interest in the cooperative society; and a society can increase its power over the policy and operations of the cooperative wholesale society only by increasing its membership. On the other hand, all the economy which results from the combination of a large number of industrial operations under one management is obtained under the cooperative system through the method of federating societies for the purposes of wholesale trading and manufacture.

Cooperative v. Competitive System.

THE distinguishing feature of the cooperative system is that it exists for the common good. All land or buildings acquired become the common property of all the members. Every economy in manufacture and distribution, and every advance in efficiency or improvement in machinery benefits every member, instead of going to swell the profits of some one person.

It is obvious that the attainment of the aims of the movement on a universal scale means a readjustment of our entire economic system. However, it will probably be admitted that there is room for improvement in present conditions, particularly those under which distribution is carried on. Certain abuses have grown up under the present system which cooperation would correct.

Our present distributive system has become extremely complex, due partly to subdivision of effort. This subdivision has been carried to such lengths that even the vegetables bought by the housewife may have passed through the hands of as many as five different middlemen after leaving the farmer.¹ Each of these middlemen adds to the cost price a further charge to cover his expense of handling and a profit for himself, and in some cases to cover expense incurred by submitting the article to certain operations, tending to enhance its attractiveness but adding nothing to its value. It does not necessarily follow of course that the elimination of a middleman means a reduction of cost price to the consumer. It may often be true that subdivision makes for a greater real economy than would a system of more direct trading between the farmer and housewife. Nevertheless, distinction should be made between the subdivision that means a real service performed and that which simply adds to the cost. One

¹ U. S. Department of Agriculture, Bul. No. 267: Methods of wholesale distribution of fruit on large markets, 1915, p. 22.

practice existing under the present system, which is utterly to be condemned, is that of "resales within the trade" for purely speculative purposes. Cooperation would reduce to a minimum the intermediary agencies between producer and consumer by eliminating all unnecessary middlemen.

Probably one of the greatest sources of waste and one which burdens the consumer unnecessarily is the great duplication of retail selling machinery. The committee on markets, prices, and costs of the New York State Food Investigating Commission found that New York City had one store to about every 250 persons.² The existence of a dozen little shops where three would suffice to supply the needs of the community means, of course, that the price to the consumer must be large enough to cover the overhead expenses and profit of the superfluous nine. The cooperative system would eliminate this multiplicity. English statistics show that while the movement has grown, the number of societies tends to decrease slightly from year to year, due to the amalgamation of societies to avoid overlapping of the field of activities.

Under the competitive system, the consumer's wants are supplied by dealers whose interests are directly opposed to those of the consumer, whose motive is profit, and who have no direct interest in keeping the quality of the article up or in keeping the price down, so long as they make a profit.

Under that system the dealer or manufacturer does not confine himself to the supplying of articles which the consumer needs and wants. By campaigns of advertising he familiarizes the public with his commodity and creates a desire often where there is no real need for the article. The advertising cost must be covered by the ultimate price to the purchaser. At present also the purchaser has no assurance that the article he buys is of the quality he supposes it to be.

Under the cooperative system there is no advertising, and since no profit is involved, there is no incentive and consequently no attempt to induce the customer to purchase anything he does not want. And he has the assurance of quality in his purchase, since no one has any interest in deceiving him on this point. Only those articles are manufactured which members ask for. Each member, through his vote, can express his preference or disapproval of any articles furnished.

To the cooperator the motive underlying the present distributive system—profit—is wrong. He believes that the remedy is the management of the processes of distribution, manufacture, and production by the consumer, in the interests of the consumer. Under these conditions, the motive of gain being absent, all of the evils that now face the consumer—high prices (in the sense of being more than the article is worth), poor quality, adulteration, short weight, and waste in distribution—would disappear.

Production by the Consumer.

THAT it is possible for the consumers' cooperative movement to control all the stages involved in the production of the article handled by the cooperative store and do it successfully has been

² New York State Food Investigating Commission, Report of committee on markets, prices, and costs (Aug. 1, 1912), p. 7.

demonstrated in England. There the Cooperative Wholesale Society manufactures for the retail store such things as textiles, clothing, boots and shoes, cutlery, ironware, soap, tobacco, jams, pickles, vinegar, lard, bacon, cocoa, paints, and brushes. The wheat that goes into the manufacture of the cooperative flour is largely grown on the wholesale society's own land in Canada, and is transported to England in the society's own ships. The society owns and works about 30,000 acres of land in England, and its policy is said to be to buy up every acre of tillable land offered for sale in England.

The situation in England is described thus:

The cooperative consumer of jam or tea or boots is using what was produced in a factory owned and controlled by himself (and other cooperators) and distributed by his own agents. There is no manufacturer, merchant, commercial traveler, or dealer beyond himself and his own employees. There is no one buying at a low price to sell at a higher one, as is seen when the transactions from manufacturer to retail purchaser are carefully analyzed. True, there may be a "surplus" between the charge made by the manufacturing society and its total expenses of management; if so, this is returned to the purchaser. Hence, "profits as understood by the ordinary economist have no existence in the cooperative movement." (Catherine Webb: *Industrial Cooperation*, pp. 39 and 40.)

That cooperative manufacture even in England covers only a limited field is evident. The wholesale society manufactures only articles for which there is a demand from its members and these it manufactures only for its members, not for the open market. In other words it manufactures a limited number of articles, for a known market. The fields of agriculture and the broader industries, such as mining, construction, and transportation have hardly been touched upon. Whether the movement could successfully be applied to these fields is a matter for conjecture. It is argued, however, that if the field of cooperative effort has hitherto been limited it is because the membership of the movement has been limited. Its members are predominantly of the working classes, and it must therefore supply those things which the working classes demand. The contention is that if within the movement were included all classes of society the movement would be compelled to undertake the supply of the wants of all classes whatever those wants might be.

Position of Labor Under Cooperation.

IT IS admitted that one of the most important questions to-day is that of the adjustment of the conflicting interests of employer and employee. Anything that will accomplish this is deserving of the most thoughtful consideration. What cooperation offers in this respect can best be shown by the English experience.

With the growth of the movement, members of the cooperative societies, themselves, in most cases, employees, have in their capacity of cooperators, become large employers of labor—in 1918 the societies belonging to the English Cooperative Union employed a total of 164,383 persons. Thus has developed a most interesting situation which one writer has described as follows:

Cooperators have been faced with the labor problem in a double position. In their own lives, and in the factories and shops in which they work, in their traditions and their ideals, they belong to labor, and take naturally the standpoint of the employed and wage earner; in the cooperative society and factory, as cooperators,

they have been forced to look at the same problems through the eyes of the employer and wage payer. (Leonard Woolf: *Cooperation and the Future of Industry*, p. 65.)

The same writer, though admitting that there may still be co-operative factories in England in which "the wages paid are disgracefully low, the hours long, and the general conditions unsatisfactory," nevertheless declares that—

If you take the movement as a whole, there can not be the slightest doubt that the level of conditions of employment within it is higher than it is outside. All over the country cooperative societies will be found to be leading the way in the matter of fair wages and short hours, and this has been true of the movement from the earliest time. (Leonard Woolf: *Cooperation and the Future of Industry*, p. 66.)

Furthermore it is stated that the impulse toward the improvement of the conditions of the employee in the movement has come from within and not from without the movement.

Not only has the trade-union been recognized by the cooperative movement as the proper spokesman and champion of the employees but many of the societies require their employees to be trade-unionists. The position taken by the trade-unionists toward their cooperative employer is shown by the following:

An ardent trade-unionist, an employee of a cooperative society, once said to the writer: "Of course there's a difference between the relations of an employee to a capitalist employer and those of an employee to a cooperative employer. The object of the first is to smash his employer, for the only way to argue with capitalism is to knock it on the head. But practically no cooperative employee wants to smash cooperation; it's almost as much in the interests of the employee to spread cooperation as it is in the interests of the cooperator." These are strong words, but they show that the cooperative commonwealth was not altogether a dream. The difference in the relations, noticed by the trade-unionist, is due solely to the fact that the cooperative employee feels that, in a broad sense, his interests as a worker will be protected by the workers who are members of the society. That is the practical value of the democratic constitution which we examined in the last chapter. The whole of industry is very far from being cooperative; it will be a long time before the whole community are cooperators; and many cooperative employees are themselves not members of the movement. But the time has already come when the worker can at least feel that his interests are represented by a large body of workers in the membership of every society. There is in fact already to some extent a balance of power in the cooperative control of industry. That is why while the relations of labor to capital inevitably result in "class warfare," class warfare between cooperators and labor is inconceivable. (Leonard Woolf: *Cooperation and the Future of Industry*, p. 75.)

Cooperation as a Universal System.

AS TO whether cooperation will ever become universal, students of the subject differ. Theoretically, there seems to be no reason why the movement should not modify its structure and organization so as to include within its limits all forms of activity. However, since affiliation with the movement is entirely a voluntary matter it is doubtful if cooperation would ever become absolutely universal. The scope and limitations of cooperation have been well summed up in a recent book³ on the subject:

"The basis of the membership is a human being, pure and simple. Potentially, membership includes all society—it is all-inclusive. Consumers' cooperation is essentially a social movement, for the interests it represents permeate all society." The author of this book thinks, however, that cooperation being voluntary with the

³ Albert Sonnichsen: *Consumers' Cooperation*, New York, MacMillan Co., 1919.

individual, will never wholly supplant private enterprise. While theoretically it would accomplish the complete socialization of industry, there would always be an opportunity for "the private capitalist who could, or thought he could, carry on business in competition with the socialized industry," for the inventor, and for the man with originality and individuality in creative work. Cooperation "is based on the happiness, the free will, of the individual. It desires to include no one it can not benefit. When cooperation has spread just so far as it can benefit human beings it will stop, and be perfectly content to stop."

Russian Cooperative Movement.

By A. J. ZELENKO.

STATEMENTS concerning Russia are numerous and conflicting. Questions as to what statements are true are difficult to answer. Many of the things that are being said are, to a certain extent, true; in some parts of Russia these things may have happened, but one can not definitely credit them as applying to Russia in general. Those who travel through a country are impressed only by the things which they have come to observe, so that a particular occurrence may often present various aspects, according to the viewpoint of the person observing it. Such observations are, of necessity, only surface observations. The undercurrents in the life of a country present an entirely different aspect.

Russia is about two and a half times as large as the United States, and fully 93 per cent of its population is engaged in agricultural pursuits, leaving only about 7 per cent for the urban population. In Russia the people live in old settlers' communities. The farms are not scattered all over the country at long range from one another. The people there were naturally drawn together and they settled in groups, mainly for self-protection, because the severe winters, the vast stretches of waste country, danger of wild animals, and attack from Mongolian tribes in the olden times, were all elements to bring the people together.

Another fact to be taken into consideration is that throughout that vast Russian country the means of transportation has always been very poor, and the people of each village have been compelled to fill their own needs—supply their own food, weave and make their own clothing, and create almost every article necessary for their own daily life and work. They did not feel so much the need of the things produced by the city, because they were situated so far away from the manufacturing centers. Even now there are small communities in Siberia whose inhabitants can not reach the larger settlements without traveling for from two to six days at a time, and so these communities live just for themselves, producing everything to meet their daily wants. And the result is that approximately 37 per cent of all material used is made by the artisans working throughout the rural portions of the country.

From one point of view this communal self-preservation has been beneficial to Russia. The merchant class developed only weakly, and big industry has not been well organized. Private capital is not strong in Russia as it is in Europe where a greater percentage of the people live in large communities. In olden times, when the peasants needed wood they would meet, organize into a small group called an *artel*, and go together into the forests to cut it. Each *artel* would elect its own foreman to take charge of the work, and to divide the proceeds among the members according to their respective labors. In a similar way the fishermen along the seacoasts established *artel* fisheries, the farmers brought their dairy products together and founded *artel* creameries, and the men of the northern villages each year formed *artels* for their trip to the south to help in the reaping of the harvests. Thus it was in many other lines of the peasants' agricultural and industrial activity, and whenever a new enterprise was undertaken the spirit of cooperation was always present. And so by looking back over a thousand years it is found that cooperatives, in primitive form, have always existed in Russia.

In Russia the old feudal system left all power in the hands of the nobility, which represented the interests of the large landowners, and private commercial enterprise was so little developed that there was not much competition to be met in the organization of primitive cooperative undertakings. When in 1863 the peasants received their freedom and were no longer the slaves of the nobility, cooperative societies—based on the old natural group or *artel* enterprises, but now backed by modern methods and the possibility of establishing duly registered societies—sprang up and began to grow like mushrooms. In 1865 the first cooperative society, with written resolutions and by-laws, was organized; in 1874 there were 353 such societies; in 1917 the number had grown to 59,753; and in 1918 there were about 50,000 individual societies. In that same year there were twenty million members of the cooperative movement, the majority of whom were householders, and, with their families, brought the total number of cooperators in Russia to about one hundred millions. Their power is shown by the fact that after the great war, and during a time of civil war and a great lack in the means of transportation, the cooperative societies in 1918 had a turnover of 10,000,000,000 rubles (\$5,150,000,000, par), which surely demonstrates their ability to buy and dispose of merchandise among the members of the cooperative societies even during that most trying period in the history of Russia.

Types of Russian Cooperatives.

THERE are four types of cooperative enterprises in Russia: The consumers', producers', savings or credit, and insurance cooperative societies.

Consumers' Societies.

Usually the consumers' cooperative society is undertaken because of the villagers' dissatisfaction over the prices and quality of the goods furnished by the village grocer. Perhaps they know also that the people of the adjoining village have a cooperative store and are already receiving dividends. The villagers apply to the regional

union, an organizer is sent to their village, statutes are discussed, by-laws approved, and a new society is born.

Sometimes societies have failed because they did not have money enough to compete with small private enterprises in the villages, and did not wish to join in the union of societies. Sometimes, too, they selected some dishonest salesman who took advantage of the people. When these societies came to realize that they really needed the sustaining aid of other societies, and that they would benefit by mutual help, they joined the regional unions mentioned before, where the representatives of the respective societies in a certain region or county came together for buying. Each of these regional unions may be composed of 10, 20, or even 1000 societies. There has never been a failure of any such union. The shares belong to the societies, but not to individual members, and are taken in proportion to the membership of the retail societies. Altogether there are about 500 regional unions, and some of them, like the Union of Siberian Cooperative Unions ("Zakoopsbyt"), the Petrograd Wholesale, the Don-Kubon-Terek Union, and others, are very powerful societies, which build and conduct their own factories. They manufacture soap from fats, they make butter and cheese in large dairies, conduct shoe and tobacco factories, and sell these products back to their own members, the small village societies. Besides this work, they each year set aside enough money from the profits to maintain a corps of instructors and experts in many fields of educational work for the benefit of their members.

The regional consumers' unions merge again into a central wholesale union in Moscow, called the All-Russian Central Union of Consumers' Societies, which was organized in 1898. In 1918 its membership consisted of 500 federations, comprising 40,000 local societies and about 12,000,000 individual members. During that year its capital amounted to 100,000,000 rubles (\$51,500,000, par), and its turnover was 2,000,000,000 rubles (\$1,030,000,000, par). This union operates flour mills, candy, shoe, tobacco, soap, sirup, chemical and match factories, refrigerator plants, and fisheries, valued at 800,000,000 rubles (\$412,000,000, par).

Producers' Societies.

Since 93 per cent of the population is rural, it will be easily understood that many types of producers' societies were formed for the purpose of disposing of the respective yield of each agricultural activity. Thus there are producers' societies for the marketing of eggs, butter, hemp, flax, timber, furs, fish, etc.

The next step is the organization of a group of societies into a union. According to their various specialties, the producers' unions are also organized into central bodies such as the Central Egg, Union of Siberian Creamery Associations, Central Hemp, Central Flax, Central Lumber, Central Truck Gardeners, Central Potato Starch Producers, etc.

Even before the beginning of the Great War, about 60 per cent of the Russian butter sold abroad belonged to the cooperative unions; about 40 per cent of all the eggs were marketed by cooperative societies; and about 75 per cent of all the flax, as well as about 60 per cent of the hemp, was grown by cooperators.

The latest consolidation is that of the various small artisans in the rural districts, and even in the cities, into artels of shoemakers, makers of clayware, toy makers, felt makers, hardware producers, and other small craftsmen, who have organized their own respective producers' societies, and now combine in the central artisan union called "Kustar Union." Since the Russian cooperative credit unions came to the assistance of the artisans, the latter have been greatly helped in their competition with private concerns, for they can obtain the necessary credit from the bank to purchase raw materials and can commission the bank to sell the finished products, receiving in advance about 80 per cent of the final selling price.

In Leipzig, Germany, is the world-renowned fair of toys, which are later sold not only in Germany, but to England, America, Africa, and Australia. Even before the war the Russian artisan unions sent representatives there and sold millions of marks' worth of toys.

What has been the result of this cooperative plan of work? When the Russian industries stopped because of the lack of materials, transportation and other difficulties, the small artisan increased his production to meet the necessities of his country. We hear that big industries have been destroyed, but the country is still being supplied—perhaps it is being supplied insufficiently, especially in so far as manufactured goods are concerned, but nevertheless the people are being furnished with at least the bare necessities—and the reason is that the small artisans have developed and increased to such an extent that they are able to help themselves and their countrymen survive until common enterprise and mutual help enable the Russian people to restore their means of production.

Credit Societies.

Banking facilities not being well developed in Russia, the cooperatives established credit societies in many villages in order that the members might deposit their savings, or obtain credit when necessary. For instance, if a farmer wishes to make improvements on his homestead, he may go to his credit society and receive the required money on credit. But not only do the individual cooperators need the credit extended by the credit or savings societies; the societies themselves, as well as the large wholesale unions, require money with which to carry on their immense business transactions. They borrow money not only from the regional credit unions, into which the small local credit societies are combined, but also from the central cooperative bank in Moscow, called the Moscow People's Bank. The cooperative unions and societies own all the shares of this bank, and elect the members of the board of directors to control the management of the business. The bank is the clearing house for all kinds of large cooperative enterprises; it finances the consumers' and producers' unions, and also helps in the transactions of the central producers' unions, by buying for them at wholesale prices all needed materials in the line of agricultural machinery and supplies. Founded in 1912, the bank in 1919 had a capital of 100,000,000 rubles (\$51,500,000, par), and a turnover of 5,823,578,394 rubles (\$2,999,142,873, par). Recently a special union called "Selskosiuz," has been organized by the unions interested in buying agricultural im-

plements, and this new union now works independently of the Moscow People's Bank.

Insurance Societies.

Cooperative insurance societies came into existence during the war. Here in America insurance is generally carried on by private companies, but in Russia insurance has already been managed successfully on a large scale by cooperative societies.

Extent and General Aspects of the Movement.

ALTOGETHER there are no less than 50,000 small societies spread over the entire country. In almost every large village one will find a small retail store, very often a farmers' or small producers' society, and a savings bank or credit society. Each of these four has its own separate constitution and its own board of directors, but some of the members are workers and members of consumers' as well as producers' and credit societies.

To correlate, harmonize, and defend the interests of the cooperatives on questions of national importance, there is in Moscow the All-Russian Council of Cooperative Conventions, where all branches of cooperative activity are represented. This council has only consultative and advisory power, as all economic transactions are carried on directly through the respective unions.

Cooperative activity has also found a special field among the industrial workers and various State employees, such as the postal and railroad officials and municipal clerks. Here the consumers' societies established their foothold. Many years ago the proprietors of the factories started stores from which their workers might buy supplies. In many instances these stores were carried on conscientiously and honestly, but in others the workers were forced to pay unfair prices, as their salaries were paid in checks which had to be presented at the stores for exchange in merchandise and groceries. Gradually the more progressive employers introduced a system of cooperative stores, in which part of the capital was supplied by the employer himself, and the rest by shares sold to the employees. Such stores were known as "dependent cooperative stores." But the workers desired to reorganize and to become independent. A campaign was launched, many stores were bought out, especially during the past six or seven years, and as a result the dependent store has gone into the archives of history. Labor cooperation is conspicuous because of its generous grants of profit money for the educational and social uplift of the members and their families. The same should be said of State and municipal employees' cooperative societies.

Though the city dweller was last to enter the movement, his delay in joining the movement is natural. The city is individualistic, its population is fluctuating, and the interests which its people have in common are more often intellectual, esthetic and political than economic. But the Great War, revolution, and civil strife, followed by economic disaster and high living costs have shown them more clearly the urgent need of economic cooperation, with the result that the cooperative movement has spread rapidly in the cities, where members are now counted in tens of thousands. This common

economic enterprise has brought the members and their families in closer contact with one another, and thus has fostered the organization of many social enterprises for the benefit of the various members of the families, such as the establishment of kindergartens, playgrounds, libraries, summer camps, cooperative vegetable gardens, and many other kinds of recreation.

The proportionate growth of cooperation among the various classes of society is shown by the fact that 86 per cent of the peasantry, 7 per cent of the industrial workers or laborers, and 7 per cent of the middle class are engaged in cooperative enterprises.

Such has been the activity of the Russian cooperators that the movement has outgrown national lines. Even before the war the largest unions established headquarters in other countries. The Moscow People's Bank, the Union of Siberian Creamery Associations, the All-Russian Central Union of Consumers' Societies, and the Union of Siberian Cooperative Unions ("Zakoopshyt"), opened foreign offices. Offices are now maintained in London, New York, Paris, Constantinople, Stockholm, Christiania, Copenhagen, Helsingfors, Warsaw, Berlin, Marseille, Harbin, Shanghai, Kobe, and Yokohama, as well as at all the principal ports of Russia, such as Archangel, Murmursk, Vladivostock, Novorossysk, Rostov-on-the-Don, Odessa, and Petrograd. In addition to the above the All-Russian Central Union of Consumers' Societies maintains branches in Northern Persia and throughout Mongolia.

Millions of dollars' worth of goods have been bought and sold in these various countries, by working in conjunction with the English and other national wholesale societies, in the hope that the cooperatives may protect the economic interests of the Russian people abroad as well as they have protected them at home. Rice is bought in China, tea in India, cocoa in America and Java, and machinery in America and England, at wholesale prices, and thus large amounts of money are saved every year.

Educational and Social Work of the Cooperatives.

THE educational activities of the cooperatives may be divided as follows:

1. Extension courses for the young people in the country.
2. Summer courses to prepare instructors and lecturers.
3. Short winter courses for village bookkeepers.
4. Regular university courses for higher cooperative training.
5. Peasant universities. There are already five or six peasant universities established throughout the country along the lines of the Danish University which peasants may attend during the winter months, to receive instruction in agriculture, farming, home economics, and civics. Many groups are sent to the educational department of the central unions.
6. Cooperative elementary and high schools. There is a new movement on foot to establish new types of elementary and high schools for children, by employing only methods based upon cooperative principles.

There are no less than 500 wholesale consumers', producers', and credit unions in Russia, and each has its staff of traveling lecturers,

bookkeepers, managers, and experts in agricultural and various kinds of local industries, who are constantly visiting the different societies in their districts. Altogether there are at least 3,000 such instructors engaged in this work. These instructors are also trying to introduce more intensive social and educational training among their groups. If a local society decides to start a village library, the members ask the district wholesale union to send the material, and the latter in turn applies to the central wholesale union which prints its own books, or buys whole editions direct from private firms. Not less than a hundred thousand books and ten million pamphlets have been printed during this past year to be resold in the small cooperative societies.

The instructors try to satisfy the needs of all generations. The older folk gain information regarding agriculture, bootmaking, bee culture, and the lumber industry. The young people are supplied with material for their literary, social, and theatrical clubs. The unions sometimes keep special instructors who go into the villages to show the people how to start their dramatic ventures. The wholesale center keeps on hand a large stock of theatrical paraphernalia, ranging from scenery and costumes to wigs and other make-up, which it sells or rents at a nominal charge. It is an exciting event in the life of a young peasant boy to find himself transformed to represent a foreign courtier, an old Russian knight or boyar, a banker, or a merchant. For the most part the plays produced are of very good social and cultural value, and with the aid of the instructors the best classical works are introduced. The older folk often protest against all these "extravagances" brought by the younger generation, but are finally persuaded that theatrical performances were used by the church in medieval times, and are slowly being won over. Very good guidebooks for the people's theaters are written by the cooperative instructors, and the best dramas and comedies are published in very inexpensive form for from 5 to 15 cents apiece.

The cooperatives have opened many tea houses throughout Russia, and take great care that these are made real social centers. They are ever watchful to see that these places are kept clean and the atmosphere made attractive and congenial. In these houses daily newspapers are kept, meetings called, and now and then a lecture arranged. When the war broke out and the Russian Central Government prohibited the sale of liquors, many houses run by the liquor dealers were taken over by the cooperatives, and thus the problem of transforming saloons into clubhouses was practically solved in Russia as long as five years ago. About three or four thousand tea houses are already in operation there.

A typical arrangement for a cooperative commonwealth center consists of a store which is connected with the tea house, a room for the village bank where the local credit society has its office, another little room where the board may hold its meetings, and very often a storehouse for agricultural implements. The All-Russian Central Union of Consumers' Societies has also published a book which has already passed its fourth edition, entitled "How to Build and Control People's Houses."

When a traveling lecturer or instructor arrives at the village with his lantern and pictures, the boys of the village rush through the

streets, excitedly announcing at every house, "The city uncle has arrived, and will show us some new pictures." Gradually the school-house, the social center, or the library building, as the case may be, is filled to overflowing. After crossing himself upon entering, every one greets his neighbor with a hearty "Good evening." Children are everywhere, and those who have been unable to crowd inside the building press their little noses against the windowpanes in order to see the pictures. The instructor lectures while showing his pictures of agricultural or geographical interests, light comedy, or the activities and progress of other cooperatives which the people of this village have not yet attained, and thus a feeling of competition is aroused in the community. If the lecturer knows the people, and can express himself to them in their own simple village language, he is able to grasp the relative strength of the conservative and progressive elements of the village cooperative society, and understand just how much progress he can make at one time, and what he will have to emphasize most during his next visit. Thus the contact between the officers and the privates of this big cooperative army is formed. New leaders are constantly being developed, and faithfulness to the cause in times of stress or failure is inspired in the young workers.

Conclusion.

AT THE crucial point in Russian history, when everything has been in an unsettled condition, the cooperative unions have stood firmly. In 1918, when practically the entire country was divided into five separate parts, the cooperatives were still able to carry on their work and bought, sold, and distributed among their members about 10,000,000,000 rubles' worth of goods (\$5,150,000,000, par). This shows that they have worked in spite of political separations, for the cooperative societies are economic organizations endeavoring to remain apart from political matters.

Every citizen wishing to become a member of a society may do so, for none will ask his political opinion or religious belief; thus there are both conservatives and radicals in the societies. It is the right and duty of every citizen to express his political convictions, but it is done in political, rather than in economic, groups. It is, of course, natural that the cooperators from the industrial centers should be more radical than the cooperators from the agricultural communities, and that a member of the credit union who has been able to save a small amount from the proceeds of his toil is more conservative than the man who has only one capital—the strength of his hands.

The cooperative movement is a product of historical conditions, geographical situations, and cultural background. It can develop only along its organic lines and will adapt itself to the new conditions of life in accordance with its main natural requirements—the freedom to build and to rebuild social groups for the benefit of each member. The cooperative idea is not hostile to the political systems as long as those systems do not interfere with the principle "for the people, by the people, through the people." What the cooperatives need is the right to show initiative, and to have freedom and power vested in the social groups to organize common-welfare enterprises in which everyone is free to join if he so desires. The Russian cooperatives

firmly believe that such freedom within the State will be reached. And, as the State requires the services of the cooperatives for urgent national needs, the cooperatives have always considered it their duty to help the State and will continue always to do it.

Progress of Cooperation in Various Countries.¹

Denmark.²

DURING 1917-18 the cooperative movement in Denmark was greatly affected by the continued reduction in imports, the shortage of raw material, and difficulties in transportation. The adverse effect of these conditions on the Cooperative Wholesale Society is shown by the fact that the amount of business done by it decreased from 81,581,786 kroner (\$21,863,917, par) in 1917 to 74,043,050 kroner (\$19,843,537, par) in 1918. The wholesale society manufactures hosiery, ready-made clothing, bicycles, cement, rope, soap, cigars, tobacco, marmalade, candy, wines, tea, spices, and margarine. The productive departments were particularly affected by the conditions mentioned, the value of their output decreasing from 17,668,395 kroner (\$4,735,130, par) in 1916 to 16,377,979 kroner (\$4,389,298, par) in 1917 and to 9,598,531 kroner (\$2,572,406, par), in 1918.

The following table shows the activities of the Danish Cooperative Wholesale Society during the period 1914 to 1918:

OPERATIONS OF THE DANISH COOPERATIVE WHOLESALE SOCIETY, 1914 TO 1918.

[1 krone at par=26.8 cents.]

Year.	Number of affiliated societies.	Number of members.	Amount of business.
			<i>Kroner.</i>
1914.....	1,497	219,492	69,588,824
1915.....	1,468	232,128	71,458,207
1916.....	1,537	239,772	84,510,390
1917.....	1,574	245,544	81,581,786
1918.....	1,604	250,224	74,043,050

France.³

IT IS stated that the French cooperative societies have been very active during the war. A number of the activities have been carried on in conjunction with the various public administrative

¹ The data on which this article is based were obtained from the International Cooperative Bulletin, issues of August and September, 1918, April, August-September, October, and November, 1919, and February and March, 1920; International Review of Agricultural Economics (Rome), August-September-October, 1919; People's Yearbook, 1920; Political Science Quarterly, March, 1920; Jahrbuch des Zentralverbandes deutscher Konsumvereine, 17 Jahrgang, Hamburg, 1919; Report of the agricultural branch of Bengal (India) Revenue Department on the Working of the Cooperative Societies in Bengal, 1918-19; The Cooperative Movement in India, by P. Mukherji; and Special Report No. 13 (as yet unpublished) to the Bureau of Foreign and Domestic Commerce of the U. S. Department of Commerce on the Cooperative Movement in the Netherlands.

² A short general account of the cooperative movement in Denmark was given in the MONTHLY LABOR REVIEW for March, 1919, p. 143.

³ Short accounts of the cooperative movement in France have appeared in the MONTHLY LABOR REVIEW for March, 1919 (p. 142), and October, 1919 (p. 178).

bodies, municipalities and State Departments. In August, 1915, the cooperative societies offered to the Government their services in the distribution of frozen meat which the Parisian butchers were boycotting. The Cooperative Wholesale Society opened two of its own cold-storage depots, and the Cooperative Union of Paris was organized to carry on in Paris the work of distribution. It soon extended its activities to include other commodities and finally became the center of all the cooperative activities in Paris. It opened a cooperative restaurant whose receipts in 1918 amounted to 5,911,005 francs (\$1,140,824, par), and a number of stores, the majority of its supplies being obtained from the wholesale society. It is stated that in December, 1919, the union had 30,000 members, was operating 214 stores, and doing an annual business of 50,000,000 francs (\$9,650,000, par).

Figures for the consumers' cooperative associations show that for 79 Departments, not including the devastated areas, the number of societies has decreased from 2,478 on January 1, 1914, to 2,233, and this in spite of the fact of its being reported that between August, 1914, and July, 1918, 575 new societies had been organized. The membership of these associations increased from 600,782 in 1914 to 1,129,684 in 1918 (a rise from 242 to over 500 in the average membership) and the amount of sales from 208,000,000 francs (\$40,144,000, par) to between 560,000,000 and 570,000,000 francs (\$108,080,000 and \$110,010,000, par). It is pointed out, however, that while the figures for 1918 do show a slight increase in actual business done there is "no ground for exultation, for the increase has only kept pace with the rise in prices."

The Cooperative Wholesale Society has increased its membership from 141 societies in 1907 to 423 in 1918, and 1,088 in 1919, and its sales from 1,877,181 francs (\$362,296, par) in 1907 to 41,270,668 francs (\$7,965,239, par) in 1917-18 and 76,613,184 francs (\$14,786,345, par) in 1918-19. The value of goods manufactured by it increased from 3,797,553 francs (\$732,928, par) in 1917-18 to 6,818,096 francs (\$1,315,893, par) in 1919. The Cooperative Wholesale Society has its own bank, does a large business in wines, and operates boot and shoe factories at Fougères, Amiens, and Lillers.

Alsace-Lorraine.—Shortly after the signing of the armistice the cooperators of Alsace-Lorraine sought and obtained affiliation with the French cooperative movement. Subsequently they received a credit of 5,000,000 francs (\$965,000, par) from the French Government; assistance in the purchase of goods was rendered by the French Cooperative Wholesale Society. In many of the smaller towns and villages, branch stores have been organized.

The Strassburg society had an increase in membership over 1918 of 6,539, in spite of the fact that with the expulsion of Germans it lost 600 members. The society now supplies 25,000 families. Its sales in 1919 amounted to 10,161,452 francs (\$1,961,160, par). The society employs 259 persons, whose wages and conditions of employment have been agreed upon with the trade-unions.

Germany.⁴

THE Yearbook of the Central Federation of German Consumers' Cooperative Societies for 1919 contains a wealth of data on the development in Germany during the war of the cooperative movement in general and of consumers' cooperative societies in particular.

In the following table is shown the number of the various classes of cooperative societies registered on January 1 of the years 1914 to 1918:

COOPERATIVE SOCIETIES REGISTERED ON JANUARY 1, OF EACH YEAR, 1914 TO 1918

Class of society.	Number of societies in—				
	1914	1915	1916	1917	1918
Credit societies.....	19,203	19,568	19,620	19,693	19,793
Industrial societies dealing in raw materials.....	436	462	542	662	856
Agricultural societies dealing in raw materials.....	2,429	2,565	2,621	2,703	2,756
Societies for the purchase of merchandise.....	317	338	347	426	493
Establishment societies:					
Industrial.....	348	361	360	351	340
Agricultural.....	1,909	2,073	2,070	2,160	2,218
Societies for the purchase of machinery and tools.....	17	15	14	14	13
Storage societies:					
Industrial.....	123	114	127	134	130
Agricultural.....	512	520	540	567	608
Raw materials and storage societies:					
Industrial.....	154	166	165	184	187
Agricultural.....	24	21	22	24	32
Productive societies:					
Industrial.....	428	430	540	859	1,029
Agricultural.....	4,001	4,066	4,064	4,076	4,092
Stock breeding and grazing societies.....	486	540	544	546	560
Consumers' societies.....	2,340	2,320	2,283	2,280	2,277
Housing and building associations:					
Paper.....	1,346	1,403	1,386	1,382	1,391
Society houses.....	128	139	143	140	138
Other societies.....	378	380	353	364	371
Total.....	34,579	35,481	35,746	36,565	37,284

It is apparent that the number of cooperative societies has not undergone any considerable change during the war. The relatively large increases in the number of societies dealing in raw materials, those purchasing merchandise, and the industrial productive societies are to be ascribed to the close cooperation of the handicrafts in the purchase of raw material from the State central distributing office. The small decrease in the number of consumers' societies is due to the consolidation of the societies into district societies and also to the fact that a number of small societies which were not affiliated with strong central organizations were not able to cope with the difficulties caused by the war.

The number, class, and membership of the societies affiliated with the five largest central organizations of cooperative societies are shown in the following table for the period 1914-1916:

⁴ A short general account of the cooperative movement in Germany was contained in the MONTHLY LABOR REVIEW for March, 1919, pp. 140, 141.

NUMBER AND MEMBERSHIP OF REPORTING COOPERATIVE SOCIETIES AFFILIATED WITH THE FIVE LARGEST CENTRAL ORGANIZATIONS, 1914 TO 1916, BY TYPE OF SOCIETY.

Type of society.	Year.	Societies affiliated with—					Total.
		General Federation of German Purchasing and Economic Cooperative Societies.	General Federation of German Raiffeisen Cooperative Societies.	National Federation of German Agricultural Co-operative Societies.	Central Federation of German Consumers' Societies.	Main Federation of German Industrial Cooperative Societies.	
		Number.					
Credit societies.....	1914	945	4,421	11,165	-----	438	16,969
	1915	941	4,432	11,555	-----	435	17,363
	1916	924	4,433	11,555	-----	432	17,344
Purchasing, productive, and other societies.....	1914	49	800	6,064	36	382	7,331
	1915	48	928	6,392	30	452	7,850
	1916	38	890	6,392	29	554	7,903
Consumers' societies.....	1914	269	9	-----	1,094	-----	1,372
	1915	244	17	-----	1,073	-----	1,334
	1916	255	13	-----	1,068	-----	1,336
Building societies.....	1914	208	4	36	2	-----	250
	1915	178	3	41	1	-----	225
	1916	190	3	41	1	-----	235
Total.....	1914	1,471	5,234	17,265	1,132	820	25,922
	1915	1,113	5,380	17,988	1,104	887	26,772
	1916	1,407	5,339	17,988	1,098	986	26,818
Membership.							
Credit societies.....	1914	618,408	485,416	1,090,910	-----	118,453	2,313,187
	1915	601,395	485,749	1,109,756	-----	114,320	2,311,220
	1916	592,544	482,523	1,109,756	-----	103,240	2,288,063
Purchasing, productive, and other societies.....	1914	7,078	57,276	590,030	10,191	33,192	697,767
	1915	6,452	67,188	645,550	9,643	40,454	769,287
	1916	5,749	64,447	645,550	9,351	43,102	768,199
Consumers' societies.....	1914	305,313	1,749	-----	1,717,519	-----	2,024,581
	1915	312,287	3,618	-----	1,849,434	-----	2,165,339
	1916	334,549	2,281	-----	2,052,139	-----	2,388,969
Building societies.....	1914	67,999	260	2,893	784	-----	71,936
	1915	61,197	206	3,784	485	-----	65,672
	1916	59,510	183	3,784	485	-----	63,962
Total.....	1914	998,798	544,701	1,683,833	1,728,494	151,645	5,107,471
	1915	981,331	556,761	1,759,090	1,859,562	154,774	5,311,518
	1916	992,352	549,434	1,759,090	2,061,975	146,312	5,509,193

It may be said that the above five central organizations represent the great majority of consumers' cooperative societies in Germany. The decrease in membership of the credit societies affiliated with the central organizations is probably due to war losses, since the members of these societies are largely middle-class people and small farmers.

The development of the cooperative movement of German consumers' societies during the period January 1, 1903, to January 1, 1919, is illustrated by the following table.

DEVELOPMENT OF THE CONSUMERS' COOPERATIVE SOCIETIES, JAN. 1, 1903, TO JAN. 1, 1919.

[1 mark at par=23.8 cents.]

Item.	Jan. 1, 1903.	Jan. 1, 1919.	Increase.	
			Amount.	Per cent.
Membership.....	950,000	3,000,000	2,050,000	215.8
	<i>Marks.</i>	<i>Marks.</i>	<i>Marks.</i>	
Total sales of consumers' societies.....	212,463,700	789,549,000	577,085,300	271.6
Sales of articles produced by the societies.....	21,312,000	174,663,000	153,351,000	719.6
Discount sales of noncooperative stores to members of consumers' societies.....	25,346,000	11,280,000	14,066,000	155.5
Cash on hand.....	2,928,850	6,411,000	3,482,150	118.9
Stock of merchandise.....	28,022,150	82,470,000	54,447,850	194.3
Capital invested in securities.....	13,452,950	152,700,000	139,247,050	1,035.1
Fixtures, etc.....	4,797,500	11,805,000	7,007,500	146.1
Real estate.....	29,307,500	135,375,000	106,067,500	361.9
Share capital.....	18,569,650	57,210,000	38,640,350	208.1
Reserve fund.....	8,894,850	52,743,000	43,848,150	493.0
Loans contracted and savings deposits.....	7,079,400	146,694,000	139,614,600	1,972.1
Mortgage debts.....	16,131,950	59,058,000	42,926,050	266.1
Shares in houses (mortgage deeds).....	1,976,950	7,686,000	5,709,050	288.8
Debts for merchandise.....	4,646,450	16,257,000	11,610,550	249.9
Credits for discounts, and surplus.....	22,066,600	50,637,000	28,570,400	129.7

1 Decrease.

The consumers' cooperative movement now includes one-fifth of the population, if the families of members of consumers' societies are considered. Even the powerful economic disturbances caused by the war could not retard the development of consumers' societies.

The relatively larger increase in sales as compared with membership of these societies shows that the members have patronized the stores of their societies to a greater extent than before. Another noteworthy fact is that the sales of articles produced by the societies themselves showed an increase of 720 per cent. This figure does not include the articles produced by the Cooperative Wholesale Society. Production by societies themselves is so increasing that soon one-half of the articles purchased by organized consumers from their societies will have been produced either by the societies themselves or by their Cooperative Wholesale Society.

Discount sales of noncooperative concerns to members of consumers' societies have decreased 55.5 per cent. These sales include only articles which the consumers' societies do not keep in stock. As the consumers' societies are continually enlarging the number of articles for sale in their stores, discount sales by noncooperative stores decrease proportionately. During the war, moreover, when stocks in all classes of stores were very low, a number of noncooperative concerns which had discount contracts with consumers' societies refused to live up to these contracts or to renew them.

The value of stocks of merchandise rose 194 per cent. The relative increase is smaller than that of sales, which is probably due to the great scarcity of all kinds of merchandise during the war.

The capital of the societies consists of share capital and of the reserve funds. The share capital increased 208 per cent. The reserve funds increased 493 per cent. The share capital and the reserve funds combined show that the financial strength of consumers' societies has increased considerably but not enough to make

satisfactory the financial condition of the societies. There was an enormous increase in savings deposits—1,972 per cent. These savings deposits may, however, be withdrawn by the members on short notice, and must, therefore, be invested in quick assets. In order to put the consumers' societies on a sound financial basis the funds required for their operation should, however, be the societies' own funds and be composed chiefly of share capital and reserve.

The item bills payable for merchandise increased 250 per cent. Compared with the total amount of sales, which for 1918 was 789,549,000 marks (\$187,912,662, par), the item of 16,257,000 marks (\$3,869,166, par) for bills seems insignificant. It shows that the consumers' societies pay cash for nearly all their purchases.

The development of the movement of cooperative consumers' societies per 1,000 members during the period January 1, 1903, to January 1, 1918, is shown in the following table:

DEVELOPMENT OF CONSUMERS' SOCIETIES PER 1,000 MEMBERS, 1903 TO 1918.

[1 mark at par=23.8 cents.]

Item.	Jan. 1, 1903.	Jan. 1, 1910.	Jan. 1, 1914.	Jan. 1, 1918.
	Marks.	Marks.	Marks.	Marks.
Totalsales.....	223,646	280,606	285,697	263,183
Sales of articles produced by the societies.....		36,619	53,264	58,221
Discount sales of noncooperative stores to members of consumers' societies.....	26,680	21,885	13,363	3,790
Cash on hand.....	3,083	2,567	2,396	2,137
Stock of merchandise.....	29,497	31,979	32,201	27,490
Capital invested in securities.....	14,161	17,197	30,870	50,000
Fixtures, etc.....	5,050	7,013	8,806	3,935
Real estate.....	30,850	43,232	50,819	45,125
Share capital.....	19,547	19,195	15,873	19,070
Reserve.....	9,363	11,524	13,918	17,561
Loans contracted and savings deposits.....	7,452	18,148	36,051	48,893
Mortgage debts.....	16,981	21,753	23,116	19,686
Shares in houses (mortgage bonds).....	2,081	3,153	3,513	2,562
Bills payable for merchandise.....	4,891	5,714	5,524	5,419
Discounted credits of members.....		4,060	8,864	7,302
Surplus.....	23,228	20,603	16,265	9,597

As concerns the composition of the membership of cooperative consumers' societies, no data are available for all societies combined, but below are given occupational statistics, for the year 1918, of the membership of the Central Federation of German Consumers' Societies, which may be considered representative.

OCCUPATIONAL STATISTICS OF THE MEMBERSHIP OF THE CENTRAL FEDERATION OF GERMAN CONSUMERS' SOCIETIES, 1918.

Occupational group.	Number.	Per cent.
Independent tradespeople.....	120,794	5.63
Independent farmers.....	45,889	2.13
Professional workers, State and municipal employees.....	98,555	4.59
Wage earners in industry.....	1,554,394	72.34
Wage earners in agriculture.....	45,485	2.11
No fixed occupation (pensioners, persons living on their income, etc.).....	283,739	13.20
Total membership.....	2,148,856	100.00
Male membership.....	1,683,019	78.32
Female membership.....	465,837	21.68

India.

THE cooperative movement in India dates from March 25, 1904, when the cooperative credit societies act was passed. The growth of the movement has, however, been rapid. In 1915 there were 17,327 cooperative societies, having 824,469 members, and capital to the amount of Rs. 89,661,722 (\$29,086,263). Since India is primarily agricultural it is not surprising that of the above number 15,861, or about 92 per cent, are agricultural credit associations. Even this number is inadequate, since there are in India 200,000,000 agriculturists to be financed. It is stated that by the aid of these associations "laborers have become owners; hopeless debt has been banished and the money lender driven out; agriculture and industry have been developed, and the villagers in the poorest tracts have become prosperous; the illiterate man has turned toward education and the drunkard has been reclaimed; the middleman has been eliminated, the raiyat is getting full value for his produce, and paying his rent with ease; village life has been stimulated by associated action and by the business education of the bank; punctuality, thrift, and mutual confidence are being taught; litigation has decreased and morality has improved; activity has taken the place of stagnation and routine; associated action has replaced mutual distrust."

Except for the credit societies, cooperation is still in the experimental stage.

The greatest obstacle to the growth of cooperation in India is stated to be the illiteracy of the people.

Bengal.—The year 1917-18 was a year of hardship for the cooperative societies of Bengal, owing to the extremely low prices obtained for jute and rice. In 1918-19, however, better prices were obtained for jute and the price of rice rose to "unprecedented heights."

In 1918-19 the number of cooperative societies in Bengal showed an increase of 615 over the previous year, and the membership increased 16,021 in the same time. A large increase in financial prosperity was shown by the societies, but this, it is pointed out, may have been partly due to the rise in the price of the rice and jute produced by members of the societies. One society, which in the year ending June 30, 1919, realized a "profit" of Rs. 300,000 (\$97,320, par), includes in its activities the operation of a purchase and sale society, a cattle insurance business and a demonstration farm, as well as educational activities, dispensing of medicine, relief work, and town improvement.

The table below shows the operations during 1918-19 of various classes of societies in Bengal:

OPERATIONS OF COOPERATIVE SOCIETIES IN BENGAL, INDIA, 1918-19, BY CLASS OF SOCIETY.

[1 rupee at par=32.44 cents.]

Class and society.	Number of societies.	Number of members.	Amount of business.	Share and working capital.	Reserve fund.	Profit.
<i>Agricultural.</i>						
Credit societies.....	3,894	128,471	¹ 3,066,454	<i>Rupees.</i> 8,531,532	<i>Rupees.</i> 1,164,560	<i>Rupees.</i> 231,619
Purchase and purchase and sale societies.....	5	2,628	² 151,458	85,360	1,851	4,123
Production and sale societies.....	23	3,556	² 513,452	739,470	292,349	301,786
<i>Nonagricultural.</i>						
Credit societies.....	104	31,184	2,928	4,591,708	185,101	148,410
Purchase and purchase and sale societies.....	18	2,378	112,278	110,405	814	512
Production and sale societies.....	136	1,995	² 14,104	88,746	4,353	1,208

¹ Loans to individuals and societies.² Including sale of goods to members and purchase of members' products.

Besides the societies shown in the table there are also 52 central cooperative banks having a working capital of Rs. 8,260,976 (\$2,679,861, par) and a provincial bank whose working capital is Rs. 1,963,069 (\$636,820, par).

Italy.

THE cooperative movement in Italy dates back to about 1854 when in order to mitigate the effects of a famine, the General Association of Workers at Turin organized a cooperative store. Ten years later the railway officials at Turin organized a consumers' association which had immediate success and soon was doing an annual business of over a million lire (\$193,000, par). About the same time (1864) a similar organization was formed by railway officials at Milan. Difference of opinion caused a division of the society into two societies, both of which still exist and rank among the most important societies in Italy.

The period 1870-1890 saw the formation of a number of cooperative agricultural societies, as well as productive societies formed by various occupational groups, such as printers, joiners, blacksmiths, shoemakers, masons, dockers, etc. Though many of these latter failed because of "their inability to conquer the individualist spirit of their members," enough were successful to demonstrate the feasibility of this form of cooperative enterprise.

The National Cooperative League was formed at the first National Congress, held at Milan in October, 1866. This league is composed of societies representing all types of cooperative effort. Since the formation of the league the number of affiliated societies has increased from 36 in 1866 to 3,000 in 1919.

It is stated that in the past few months the number of cooperative societies in Italy has grown to 10,000. The societies are small, however, the average membership being 150.

Figures collected by the Italian National Cooperative League show that the 7,249 societies for which information was obtained are divided, according to type of society, as follows:

Consumers' societies.....	3,814
Productive and labor societies.....	2,351
Agricultural societies.....	425
Miscellaneous societies.....	425
Federations of societies.....	234
Total.....	7,249

Fifty of the most important societies did a combined business of 280,000,000 lire (\$54,040,000, par) during 1918 and exceeded this figure in 1919. The Cooperative Union at Milan alone had a turnover of 70,000,000 lire (\$13,510,000, par), and the Cooperative Alliance at Turin, of 40,000,000 lire (\$7,720,000, par).

The labor societies form a special phase of the cooperative movement in Italy. These societies undertake contracts for work, which is performed by the members. It is reported that in some Provinces these cooperative societies have practically driven private contractors out of business. The cooperative labor societies of Reggio were given the work of constructing the Reggio-Crano Railway, and have for the last 10 years been responsible for its management.

Another distinctive feature of the Italian movement is the collective leaseholding societies organized generally for the purpose of finding employment for their members. Though, according to reports, these societies have not acquired sufficient land to provide continuous employment for their members, their work has resulted in a distinct improvement in this respect. The following statement shows the amount of land cultivated by the collective leaseholding societies in each Province:

	Acres.
Bergamo.....	2,189
Milan.....	2,241
Pavia.....	1,203
Parma.....	2,901
Reggio d'Emilia.....	3,571
Modena.....	240
Bologna.....	4,435
Ravenna.....	17,297
Ferrara.....	1,011
Sicily.....	70,137

Netherlands.

THE cooperative movement in the Netherlands had its beginning in 1837, when an agricultural cooperative association was formed in Groningen. Since that time the movement has expanded until its activities now cover a wide range. In the field of production are found cooperative creameries, sugar refineries, strawboard factories, potato-meal factories, associations for the purchase of live stock, feed, fertilizers, and implements, associations for the marketing of agricultural and horticultural products; in the field of banking there are farm-loan banks, savings, and mortgage banks; insurance is represented by hail, live stock, and various types of mutual life, fire, accident, and unemployment insurance; in addition there are the numerous and well-organized consumers' societies, the cooperative kitchens,

cooperative building associations, and cooperative associations of other forms.

It is stated that the first year of the war was a period of unprecedented prosperity for all types of cooperative societies in Holland. Thereafter, however, the societies suffered because of the Government rationing system which prevented the securing of adequate supplies, since supplies were regulated on a prewar basis, which of course took no account of the societies' greatly increased membership.

The following table shows the growth of the various types of cooperative societies in specified years from 1890 to 1917:

NUMBER OF SOCIETIES OF EACH TYPE IN THE NETHERLANDS, IN SPECIFIED YEARS, 1890 TO 1917.

Type of society.	Number of societies of each type in--					
	1890	1900	1910	1913	1914	1917
<i>Consumers' societies.</i>						
Stores.....	34	74	199	254	207	343
Bakeries.....	10	39	100	121	126	142
Butcheries.....	2	3	10	10	10	10
Fuel societies.....	1	14	24	31	33	57
Agricultural societies.....	3	177	302	348	362	416
Other consumers' societies.....		21	47	65	73	97
<i>Producers' societies.</i>						
Clothing and shoe manufacturing societies.....	1	2	11	41	11	12
Printing plants.....	1	5	6	6	6	6
Creameries.....	19	441	696	763	798	845
Farmers' marketing societies.....	4	18	29	36	39	52
Poultry, egg-selling, and beekeeping societies.....		2	7	8	8	8
Export butcheries.....		1	2	2	2	4
Other producers' societies.....	2	29	108	170	188	229
<i>Other types of societies.</i>						
Savings and loan associations.....	12	100	536	687	715	796
<i>Insurance societies:</i>						
Life.....	1	2	7	7	7	7
Fire.....		1	17	20	20	29
Health and unemployment.....	1	1	9	9	9	11
Burial.....		2	3	3	3	5
Live stock.....		3	6	8	8	12
Building associations.....	32	87	201	252	269	302

The cooperative movement in the Netherlands has been characterized by a lack of unity between the producers' and consumers' organizations. Even the consumers' movement has been divided into three distinct federations—the Socialist League of Dutch Workmen's Cooperative Societies, the Roman Catholic Cooperative Union, and the so-called "neutral" Dutch Cooperative Union. The growth of each of these organizations since its formation is shown in the following table:

GROWTH OF DUTCH CONSUMERS' FEDERATIONS.

Organization and year.	Number of affiliated societies.	Number of members.
Dutch Cooperative Union:		
1897 ¹	16	7,110
1917.....	167	139,681
1918.....	170	154,681
League of Dutch Workingmen's Cooperative Societies:		
1907 ¹	17	8,300
1917.....	42	42,449
1918.....	43	38,754
Roman Catholic Cooperative Union:		
1912 ¹	(²)	(²)
1917.....	81	(²)
1918.....	192	25,705

¹ Year of organization.² Not reported.

During the war, circumstances led to the organization of a central committee, formed of representatives of each of the federations, to protect the interests of cooperators. Apparently the advantages of joint action were demonstrated, for it is now reported that two of the federations, the League of Dutch Workingmen's Cooperative Societies, and the Dutch Cooperative Union, have decided to amalgamate to form a new body, which will be called the Central Union of Dutch Distributive Societies. The aim of this new union will be: (1) the organization of Dutch consumers' societies for the safeguarding of their common interests; (2) the furtherance and protection of the interests of the consumers; (3) the spread of the cooperative movement for the advancement of purchase in common and of cooperative production; and (4) the furtherance of the knowledge of the cooperative movement.

Some degree of unity had been previously attained in purchasing, through the Cooperative Wholesale Society which, though organized as the joint purchasing agency for the stores of the Eigen Hulp Society, undertook the function of wholesale purchasing for the Dutch Cooperative Union, on the organization of that body in 1890. In 1915 it became a separate organization; it was thus enabled to receive into membership societies affiliated with the three federations mentioned above. A number of independent societies have also become members of the wholesale society.

Until the separation of the two bodies on September 26, 1914, the membership of the wholesale society was identical with that of the Dutch Cooperative Union. Its development since that time is shown in the following table:

OPERATIONS OF THE DUTCH COOPERATIVE WHOLESALE SOCIETY, 1915 to 1918.

Year.	Number of affiliated societies.	Number of members.	Amount of business.	Net savings.
1915.....	132	94,320	\$2,506,910	23,597
1916.....	158	111,214	3,608,876	30,887
1917.....	228	143,766	4,020,120	46,974
1918.....	284	168,370	¹ 2,917,063	(²)

¹ 11 months.² Figures not yet available.

The wholesale society operates production departments which roast coffee, grind spices, mix tea, and manufacture soap, wooden shoes, and flour. In cooperation with a society in Rotterdam it maintains a chemical laboratory for the analysis of foods. In 1914 it established a meat-packing plant which, however, it was forced to discontinue in 1918 because of the scarcity of meat and the government restrictions on slaughtering.

In 1917 it employed 118 persons, whose wages are regulated by collective agreement between the societies and the employees.

Norway.

IN NORWAY, as in other countries, at the outbreak of the war, the cooperative organizations had at their disposal sufficient supplies to prevent a sudden and extreme rise in prices. As the war progressed, however, a growing shortage of goods and the Government's participation in trade created difficulties for the societies, particularly the wholesale society. Eventually the formation of new retail societies had to be discouraged by the wholesale organization since it was impossible to furnish them with supplies. In spite of this fact, however, the figures of the Norwegian Cooperative Wholesale Society show progress even though the increase in sales is largely due to high prices.

The following table shows the development of the Norwegian Cooperative Union during the war period:

OPERATIONS OF THE NORWEGIAN COOPERATIVE UNION, 1914 TO 1918.

[1 krone at par=26.8 cents.]

Year.	Number of affiliated societies.	Number of members.	Amount of business.
			<i>Kroner.</i>
1914.....	149	31,000	10,019,600
1915.....	172	34,848	16,252,300
1916.....	205	47,634	24,347,900
1917.....	237	59,969	39,866,000
1918.....	235	67,910	48,139,900

Roumania.

THE first manifestation of the cooperative spirit in Roumania appeared in the founding of a "people's bank" in 1894. All other forms of cooperative enterprise since developed are in the nature of offshoots from these banks. By 1903 the number of these banks had reached 700, the membership had risen to 59,844, and the capital to 4,250,600 francs (\$820,366, par). In that year a central bank and clearing house, the Casa Centrala, was formed, which now acts as the central credit institution of the whole peasant cooperative system.

In 1918 this central bank, with its 3,170 member banks, formed a network covering the entire country. This system of banks represented 645,000 stockholders, divided, according to occupation, approximately as follows: 600,000 were peasants, 10,000 were mer-

chants, 5,000 were school-teachers, 4,000 were priests, and 26,000 were workers in miscellaneous occupations.

Under a system which had grown up, in many districts the cultivatable land was practically monopolized by speculators who leased the land from the owners and either re-leased it or worked it with peasant labor at wages fixed by themselves. The peasant thus had no choice in the matter of employment or wages.

This situation was remedied to some extent by the laws of 1905 and 1907. The first legalized the formation of peasant cooperative lease-holding societies, and the second, in order to make land available to the peasant, authorized the purchase of the large estates by the communes. Though the latter law was defective, in that owners of large estates were not compelled to sell, yet under its provisions 109 estates amounting to 127,292 hectares (314,539 acres) were purchased between 1908 and 1915, of which 20,000 hectares (49,420 acres) were sold to peasants and the remainder rented to them.

The peasant cooperative land-leasing associations formed under the law of 1905 showed "an astonishing ability" to compete with the speculators. They made a practice of hiring experts to advise them with regard to rotation of crops, choice of seeds, etc. As a result of their systematic efforts toward improvement of agricultural methods, the average yield in the best years of the land taken over by these societies has been doubled.

During the war period, and particularly after Roumania entered the war in 1916, the peasants became accustomed to cooperative effort along numerous lines and on a large scale. Under the abnormal conditions caused by the war the Government was obliged to regulate trade and take charge of the provisioning of the people. In the villages only the cooperative associations were found to be capable of performing this function, and the people's banks, the most uniform and best organized of the cooperative organizations, were placed in charge. Only through them were the people able to obtain food and carry on exchange of products. During the period October, 1916, to March, 1918, through the medium of the banks, merchandise to the value of over 14,500,000 francs (\$2,798,500, par) was supplied to the peasants and produce worth 7,000,000 francs (\$1,351,000, par) was sold.

Cooperative production has been at a great disadvantage. It is stated that the industrial enterprises with which the cooperative productive associations compete enjoy exemption from duty on raw materials, special rates on the Government railways, and various other privileges which were not until recently accorded to the cooperative societies.

The consumers' cooperative associations have been "held within small compass by the simplicity of peasant life and the fact that the peasants produce nearly everything they use."

The following table shows the growth of the various types of cooperative societies in Roumania during the period 1908 to 1916, the latest year for which figures are available:

NUMBER OF COOPERATIVE ASSOCIATIONS IN ROUMANIA, NUMBER OF MEMBERS, AND AMOUNT OF CAPITAL AND RESERVE, 1908, 1912, AND 1916, BY TYPE OF ASSOCIATION.

[1 franc at par=19.3 cents.]

Kind of association.	Number of associations.			Number of members.			Capital and reserve.		
	1908	1912	1916	1908	1912	1916	1908	1912	1916
Consumers' societies.....	207	294	340	7,580	13,105	16,000	<i>Francs.</i> 951,237	<i>Francs.</i> 1,817,806	<i>Francs.</i> 2,500,090
Forest exploitation societies..	30	143	165	1,189	8,208	13,000	229,576	1,057,613	1,280,000
Bakeries.....	9	20	25	372	1,068	1,500	28,820	101,037	136,000
Dairies.....	5	7	10	164	360	600	4,154	10,010	31,800
Mills and agricultural machinery associations.....	7	42	60	217	1,947	3,000	26,303	255,642	325,000
Gardening associations.....	5	9	25	193	471	750	17,879	31,281	102,500
Vineyards and apiaries.....	2	5	8	91	188	350	1,737	40,018	65,600
Community sales.....	2	5	150	135	312	15,000	15,063	87,481	108,090
Mines, quarries, and mineral waters.....		7	12		593	700		94,379	140,000
Cooper shops, woodworking societies, and tile works....	2	9	13	72	364	550	7,409	101,767	138,000
Miscellaneous associations....	4	5	8	130	270	400	5,469	20,743	40,000
Total.....	273	546	1,810	10,142	26,886	51,850	1,277,654	3,617,787	4,866,900

¹ This total is not the exact sum of the items but is as given in the report.

An interesting development has been taking place since December, 1918, when two decree laws provided for the expropriation of all cultivatable crown and institutional lands, all lands of subjects of foreign birth, and all rural lands belonging to absentees. In addition 2,000,000 hectares (4,942,000 acres) were expropriated from private estates of over 100 hectares (247 acres) of cultivatable land. The law of December 31, 1918, reorganized the central cooperative bank, the Casa Centrala, and gave it charge of the sale of the expropriated land to the peasants. It is stated that while great practical difficulties were encountered, expropriation was practically complete by June, 1919.

Other laws, enacted shortly after the expropriation acts, turned over to the cooperative associations the exploitation of the forests and the promotion of the creation of communal pastures.

One of the leaders in the Roumanian cooperative movement is quoted as saying: "We believe that before long the entire production of the villages will flow through the cooperatives." Where community production will leave off and strictly private enterprise begins, is stated to be impossible of prediction. Already the two are in conflict. Because the first-rate men found it more profitable to work for themselves, the cooperatives have, it is said, had to employ men who failed in their own ventures. According to the report, there are, however, those who are of the opinion that the development of cooperative effort will eliminate private capitalistic enterprise by "open competition."

Sweden.

THE founding of distributive societies in Sweden began during the period 1860-1870, about the same time as in Denmark, but the development of the societies was very gradual, and did not quicken until about the beginning of the present century. In 1899,

a central organization, the Cooperative Union, was founded, in which were federated various types of cooperative societies. At first the union was purely a propagandist organization. In 1904, however, it established the Cooperative Wholesale Society. With the establishment of the wholesale society the membership grew rapidly until at the end of 1918 there were 849 societies affiliated with the union.

In 1908, the union opened a savings bank which has made rapid progress. In the same year the union decided to limit membership to those societies which require cash payment, and in 1911, the wholesale society ceased the supply of goods to nonmembers.

The progress of the union during the war is shown in the following table:

DEVELOPMENT OF SWEDISH COOPERATIVE UNION DURING THE PERIOD 1914 TO 1918.

[1 krone at par=26.8 cents.]

Year.	Number of societies affiliated.	Number of societies reporting.	Membership of reporting societies.	Amount of business.
				<i>Kroner.</i>
1914.....	583	537	111,293	39,466,473
1915.....	687	581	127,876	54,608,695
1916.....	785	737	169,063	81,661,807
1917.....			177,473	
1918.....	849	771	204,906	143,871,705

The following statement shows the financial condition, at the end of 1918, of the 771 members of the union for which statistics are available:

	<i>Kroner.</i>
Share capital.....	7,668,547
Reserves.....	4,749,269
Goods in stock.....	23,689,231
Debts outstanding.....	1,257,229
Turnover.....	143,871,705
Gross surplus.....	13,614,588
Net surplus.....	4,035,124

Profit Sharing and Labor Copartnership in the United Kingdom.

THE British Ministry of Labor has recently issued a report on profit sharing and labor copartnership in the United Kingdom,¹ which states that the number of schemes which were in existence October 31, 1919, so far as reported to the ministry, was 182, the number of persons employed by the firms having these schemes being about a quarter of a million. These 182 schemes, it is added, were the survivors of 380 schemes which had been started at one time or another since the year 1865. It seems that the

¹ Great Britain. Ministry of Labor. Report on profit sharing and copartnership in the United Kingdom. London, 1920. 244 pp.

greatest activity in the formation of profit-sharing schemes was shown in the four years from 1889 to 1892.

The report suggests that the abandonment of the schemes which have ceased to exist has been caused by inability of the firms to earn sufficient profit to make profit sharing a success, or to some other cause independent of the profit-sharing scheme rather than to any defects inherent in the system itself, or to the dissatisfaction of employers or of the employees. Ninety-one out of 198 cases of abandonment are attributed to this last cause.

While in every year a number of firms are unable to pay any bonus at all, still it is estimated that, taking all the schemes into consideration, the average bonus over a long series of years is about 5 or 6 per cent. The average ratio of bonus to wages, covering the years 1901 to 1918, taking into account both the number who actually participated and the number who would have been entitled to participate in cases where the bonus was nil, is given as 5.5 per cent.

The number of participating employees, the total amount of bonus paid, and the average bonus per employee, by industry group, for the year 1918, are shown in the following table.

NUMBER OF SCHEMES, NUMBER OF EMPLOYEES AFFECTED, AND TOTAL AND AVERAGE AMOUNT OF BONUS PAID, BY INDUSTRY GROUP, IN 1918.

[1£ at par=\$4.8665.]

Industry group.	Number of schemes.	Number of employees participating (or entitled to participate).	Total amount of bonus.	Average bonus per employee.
			£	£ s. d.
Chemicals, oils, etc.....	5	2,393	30,509	12 15 0
Food and drink.....	10	3,622	43,396	11 19 7
Gas.....	31	22,447	24,985	1 2 3
Engineering, etc.....	6	15,004	34,415	2 5 10
Printing, etc.....	10	3,870	29,461	7 12 3
Textile.....	9	5,784	52,254	9 0 8
Merchants, etc.....	15	6,959	67,817	9 14 11
Insurance, etc.....	1	18,500	None.	None.
All other.....	18	3,254	16,891	5 3 10
Total.....	105	81,833	299,728	3 13 3

The report states that if employees in firms which distributed no bonus be excluded, the total number of actual participants in the schemes for which particulars can be given was 52,056, and the average bonus was £5 15s. 2d. (\$27.99, par).

The report gives the rules of a number of schemes of profit sharing or copartnership.

EMPLOYMENT AND UNEMPLOYMENT.

Employment in Selected Industries, April, 1920.

THE Bureau of Labor Statistics received and tabulated reports concerning the volume of employment in April, 1920, from representative establishments in 13 manufacturing industries. Comparing the figures of April, 1920, with those of identical establishments for April, 1919, it appears that in 11 industries there was an increase in the number of persons employed, while in 2 there was a decrease. The largest increase, 58.7 per cent, is shown in men's ready-made clothing, and the decreases, 5.8 and 4.6 per cent, appear in car building and repairing and in cigar manufacturing, respectively.

All of the 13 industries show an increase in the total amount of the pay roll for April, 1920, as compared with April, 1919. The most important percentage increases, 151.2, 90.7, and 81.1, appear in men's ready-made clothing, woolen, and hosiery and underwear, respectively. The big increases over last year's figures are due in part to a rise in volume of employment and in part to a recovery from the decline last year.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN APRIL, 1919,
AND APRIL, 1920.

Industry.	Estab- lish- ments report- ing for April, both years.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			April, 1919.	April, 1920.	Per cent of increase (+) or de- crease (-).	April, 1919.	April, 1920.	Per cent of increase (+) or de- crease (-).
Iron and steel.....	109	1 month.	157,237	172,487	+ 9.7	\$9,985,239	\$12,679,325	+ 27.0
Automobile manufacturing...	39	1 week..	106,337	136,429	+28.3	3,088,919	4,521,116	+ 46.5
Car building and repairing...	37	1 month.	44,530	41,964	- 5.8	2,427,945	2,579,701	+ 6.3
Cotton manufacturing.....	52	1 week..	45,724	51,754	+13.2	683,897	1,080,590	+ 58.0
Cotton finishing.....	11	do.....	6,043	7,033	+16.4	106,528	153,815	+ 44.4
Hosiery and underwear.....	65	do.....	29,499	35,092	+19.0	399,824	724,142	+ 81.1
Woolen.....	51	do.....	37,010	51,713	+39.7	683,212	1,302,990	+ 90.7
Silk.....	47	2 weeks..	15,171	16,303	+ 7.5	527,618	746,833	+ 41.5
Men's ready-made clothing...	45	1 week..	21,677	34,406	+58.7	164,205	1,165,865	+151.2
Leather manufacturing.....	32	do.....	15,914	17,070	+ 7.3	314,649	449,760	+ 20.5
Boots and shoes.....	67	do.....	52,267	58,788	+12.5	1,028,868	1,491,302	+ 44.9
Paper making.....	57	do.....	28,316	32,740	+15.6	585,531	882,274	+ 50.7
Cigar manufacturing.....	51	do.....	17,183	16,391	- 4.6	262,210	342,059	+ 30.5

Comparative data for April, 1920, and March, 1920, appear in the following table. The figures show that in 6 industries there was an increase in the number of persons on the pay roll in April as compared with March and in 7 a decrease.

The largest increases in the number of people employed appear in car building and repairing, 4.2 per cent; and men's ready-made cloth-

ing, 2.8 per cent. Percentage decreases of 3.4 and 2.3 appear in leather manufacturing and cotton finishing, while both automobile manufacturing and boots and shoes show a decrease of 1.7 per cent.

In comparing April, 1920, with March of this year, 5 industries show an increase in the amount of money paid to employees and 8 a decrease. The most important increase is one of 4.9 per cent in hosiery and underwear, while car building and repairing shows an increase of 1.1 per cent. The greatest decreases are 5.9 per cent in iron and steel, 4.7 per cent in cigar manufacturing, 4 per cent in leather manufacturing, and 3.9 per cent in automobile manufacturing. April production was somewhat curtailed because of the railroad strike.

COMPARISON OF EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARCH AND APRIL, 1920.

Industry.	Establishments reporting for March and April.	Period of pay roll.	Number on pay roll.			Amount of pay roll.		
			March, 1920.	April, 1920.	Percent of increase (+) or decrease (-).	March, 1920.	April, 1920.	Percent of increase (+) or decrease (-).
Iron and steel.....	111	1 month.	175,200	173,822	-0.8	\$13,592,304	\$12,784,705	-5.9
Automobile manufacturing.	38	1 week..	130,716	128,445	-1.7	4,417,822	4,246,399	-3.9
Car building and repairing.	34	1 month.	36,140	37,666	+4.2	2,291,280	2,316,090	+1.1
Cotton manufacturing.....	53	1 week..	53,768	53,186	-1.1	1,123,201	1,124,826	+ .1
Cotton finishing.....	10	do.....	6,961	6,802	-2.3	149,716	147,846	-1.3
Hosiery and underwear.....	65	do.....	33,844	34,184	+1.0	670,980	704,159	+4.9
Woolen.....	51	do.....	51,692	51,713	+ (1)	1,294,643	1,302,990	+ .6
Silk.....	47	2 weeks.	16,193	16,303	+ .7	762,554	746,833	-2.1
Men's ready-made clothing.	48	1 week..	34,036	35,004	+2.8	1,199,312	1,182,988	-1.4
Leather manufacturing.....	32	do.....	17,669	17,070	-3.4	468,315	449,760	-4.0
Boots and shoes.....	66	do.....	59,621	58,622	-1.7	1,483,694	1,488,626	+ .3
Paper making.....	56	do.....	31,866	31,667	- .6	853,730	852,812	- .1
Cigar manufacturing.....	54	do.....	16,934	16,998	+ .4	369,768	352,314	-4.7

¹An increase of less than one-tenth of 1 per cent.

In addition to the data presented in the above tables as to the number of employees on the pay roll, 87 plants in the iron and steel industry reported 132,771 employees as actually working on the last full day of the pay period reported for April, 1920, as against 123,867 for the reported pay-roll period in April, 1919, an increase of 7.2 per cent. Figures given by 98 establishments in the iron and steel industry for April, 1920, and March, 1920, show that 141,361 employees were actually working on the last full day of the pay period reported for in April, 1920, as against 142,763 for the period in March, 1920, a decrease of 1 per cent.

Changes in Wage Rates.

DURING the period March 15 to April 15, 1920, there were increases in wages made by establishments in all of the 13 industries. Of the establishments reporting, many did not answer the inquiry relative to this item, but in such cases it is not likely that changes were made.

Iron and steel.—Two establishments reported an increase of 10 per cent affecting 67 per cent of the employees in one and 12 per cent of the employees in the other. About 9 per cent of the force in one plant received an increase of about 6 per cent. Forty-five per cent of the men in one concern were increased 75 cents per day.

Automobile manufacturing.—One establishment gave an increase of 25 per cent to 75 per cent of the employees. Fifteen per cent of the men in one plant received an increase of 9.5 per cent. An increase of 5 per cent, affecting 36 per cent of employees, was reported by one concern. One establishment gave an increase of 2.2 per cent to 38 per cent of the force while another establishment gave an increase of 2 per cent to 4 per cent of the force.

Car building and repairing.—An increase of 15 per cent, affecting 20 per cent of the force was reported by one firm. One establishment gave an increase of 7 per cent to 8 per cent of the employees, while another establishment granted an increase of 2.9 per cent to 20 per cent of the foundry men.

Cotton manufacturing.—Two firms gave an increase of 10 per cent, affecting all employees in one firm, while the other firm did not state the number of employees affected. The entire force in two mills were given an increase of 8 per cent. All of the men in one establishment received an increase of about 5 per cent.

Cotton finishing.—An increase of 15 per cent, affecting 8 per cent of the employees, was reported by one establishment.

Hosiery and underwear.—One establishment reported an increase of 15 per cent but made no further statement. All of the employees in one mill were given an increase of 10 per cent, while 75 per cent of the employees in another mill received an increase of 5 per cent.

Woolen.—All of the employees in one establishment received an increase of 8 per cent.

Silk.—One firm granted an increase of 7.8 per cent, affecting 15 per cent of the employees while another firm gave an increase of 7 per cent affecting 22 per cent of the employees. About 9 per cent of the men in one establishment received an increase of about 6 per cent. All of the pieceworkers in one concern were increased 5 cents per hour.

Men's ready-made clothing.—One establishment gave an increase of 20 per cent to part of its employees.

Leather.—All of the employees in one establishment received an increase of 12 per cent while the entire force in another establishment were given an increase of 10 per cent. Ten per cent of the men in one concern received an increase of 6 per cent. One firm reported a general increase but made no further statement. All of the full-time workers in one establishment received a bonus.

Boots and shoes.—Two factories granted a 10 per cent increase affecting 6 per cent of the employees in one of the factories and 5 per cent of the men in the other. An increase of 8.8 per cent, affecting 4.5 per cent of the force was reported by one concern. Three plants gave an increase of 5 per cent, affecting 10 per cent of the force in one establishment, 8 per cent of the force in the second establishment, and 4 per cent of the force in the third establishment. One firm reported an increase, but made no further statement.

Paper making.—One establishment reported an increase of 25 per cent, affecting 7 per cent of the employees, while another establishment reported increases ranging from $12\frac{1}{2}$ to 22 per cent, but made no further statement. The entire force in one firm received an increase of about 14 per cent. All the men in one concern received an increase of $12\frac{1}{2}$ per cent, while the entire force in another concern received an increase of 12 per cent. One firm reported an increase of about 12 per cent, affecting about 17 per cent of the employees. All employees in three establishments were given an increase of 10 per cent. Fifty per cent of the force in one concern received an increase of 9 per cent. Two mills gave an increase of about 8 per cent, affecting 20 per cent of the employees in one mill and 18 per cent of the employees in the other. An increase of 7.4 per cent, affecting 37 per cent of the employees, was reported by one establishment, while 70 per cent of the employees in another establishment received an increase of 7 per cent. One firm that reported a general advance of wages made no further statement.

Cigar manufacturing.—All of the employees in one establishment received an increase of $16\frac{2}{3}$ per cent. One establishment gave increases ranging from 10 to 15 per cent, affecting 70 per cent of the employees. Two firms reported an increase of 10 per cent, affecting 53 per cent of the employees in one firm and 40 per cent of the employees in the other. All of the employees in one establishment were given an increase of 7.5 per cent, while the entire force in two establishments were given an increase of about 5 per cent. Ninety per cent of the men in one concern received an increase of 4.5 per cent. One establishment reported an increase of 10 per cent but did not state the per cent of employees affected. The factory workers in one plant received a bonus.

Changes in Volume of Employment in Representative Bituminous Coal Mines.

RECENTLY the Bureau has undertaken to increase gradually the number of industries from which to collect information concerning changes in employment from month to month.

One of the most important basic industries is that of coal mining; hence this industry was selected for addition to the list of 13 industries that have been covered for some time. Questionnaires were sent out and a sufficient number of returns have been received from bituminous coal-mine operators to warrant the publication of the material collected.

These figures, collected in large volume month after month, afford a barometer of industrial conditions of value to operators, manufacturers, merchants, and the general public. The information collected is published with the hope that more operators, both of anthracite and bituminous coal mines, will cooperate in this monthly collection and compilation of employment figures.

CHANGES IN VOLUME OF EMPLOYMENT IN REPRESENTATIVE BITUMINOUS COAL MINES, 1919, AND JANUARY TO APRIL, 1920.

Month and year.	Number of mines.	Number on pay roll.	Amount of pay roll for half month.	Percentages based on January, 1919.	
				Em- ploy- ees.	Pay roll.
1919.					
January.....	117	31,898	\$1,833,392	100	100
February.....		31,387	1,600,386	98	87
March.....		30,164	1,522,212	95	83
April.....		29,099	1,451,103	91	79
May.....		29,021	1,544,639	91	84
June.....		30,298	1,567,565	95	87
July.....		31,136	1,690,149	98	92
August.....		31,035	1,779,561	97	97
September.....		30,811	1,844,546	97	101
October.....		31,321	2,055,289	98	112
November.....		(1)	(1)	(1)	(1)
December.....		(1)	(1)	(1)	(1)
1920.					
January.....		33,735	2,218,630	106	121
February.....		32,299	2,066,369	101	113
February.....	93	25,362	1,701,707	101	113
March.....		27,029	1,810,080	108	120
March.....	85	24,567	1,682,296	108	120
April.....		23,499	1,554,551	103	111

¹ Because of the strike some mines were idle and others running with a small force; hence no figures are shown for these months.

INDUSTRIAL ACCIDENTS.

Influence of the War on Accident Rates in the Iron and Steel Industry, 1914-1919.¹

By LUCIAN W. CHANEY.

FOR a very long time to come the question of influence of the World War upon our social and industrial life will be a subject of earnest debate.

It is accordingly appropriate to devote this article to presenting some illustrations which seem most clearly to indicate the result which war conditions have tended to produce upon accident rates.

The first case to be considered is that of a group of mills which have been combined because they afford opportunity both to determine severity rates and to examine the movement of such rates in considerable detail. These mills are largely devoted to the fundamental departments of the industry, namely, blast furnaces, steel works, and rolling mills. They employed in the years covered (1914 to 1919) men varying in number from 35,000 to 50,000. The size of the group is accordingly sufficient to assume that the results obtained are fairly typical.

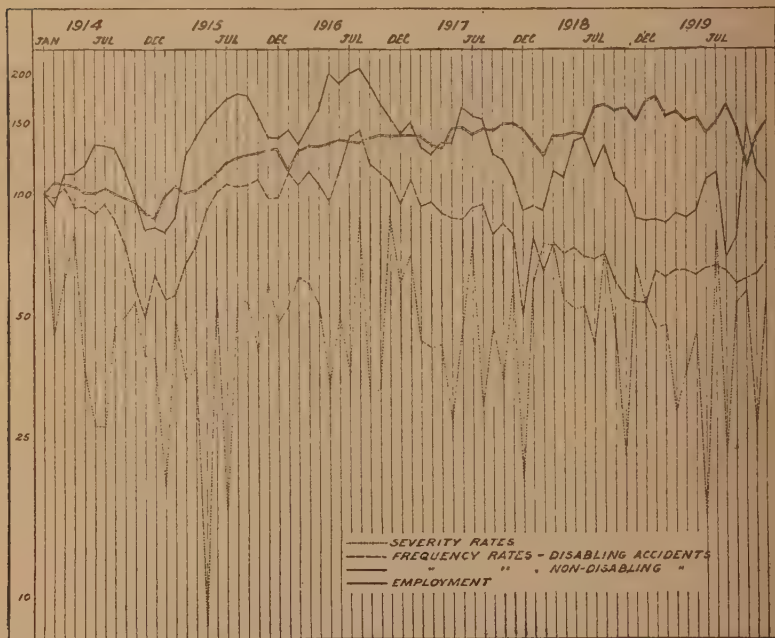
A chart will first be considered, in which are shown from month to month over the six years the fluctuations of four items, namely, employment, frequency of nondisabling accident, frequency of disabling accident, and severity of disabling accident. The figures of each group are reduced to index numbers on the basis of January, 1914, as 100. They are then plotted on a percentage scale which shows the per cent of increase or decrease from month to month.

It is desirable before proceeding with discussion of the features of this chart to emphasize one point which is brought out by it. That is the accidental character of accidents. Even in a group of employees as large as the present one it will be found that general conclusions which seem to be fully warranted are flatly contradicted by a great number of special cases. Accidents in their very nature depend on combinations of circumstances which might never occur twice. It is the unexpected which gives character to accidental happenings. This is true in some measure of all types of accidents, but particularly is it true of those which involve death or serious injury. It would be expected therefore that just such fluctuations as those recorded between the months would occur. The fact that there is not the same regularity as that found in other statistical fields does not in the least imply imperfection in the basic data nor error in the treatment.

¹ This article is from a bulletin on Causes and prevention of accidents in the iron and steel industry, now in preparation by the Bureau of Labor Statistics.

If employment be considered it will become evident that it proceeded on a fairly level keel during the first eight months of 1914. It is known from other sources of information that this was a considerably lower level than for the year 1913, which was a year of particularly high activity in the industry. There is then a further decline from which recovery begins with 1915. This increase continues with some unsteadiness until a maximum is reached in the month of

CHART A.—FLUCTUATIONS FROM MONTH TO MONTH OF SEVERITY RATES, OF FREQUENCY RATES FOR DISABLING AND NONDISABLING ACCIDENTS, AND OF EMPLOYMENT, 1914 TO 1919.



January, 1919. From that point there is a general tendency to decline.

Turning now to nondisabling accidents, it will appear that while they are doubtless influenced by the changes in employment they are more responsive to other and more obscure factors. When employment is at the lowest point this class of accidents is also at a low point. From January, 1915, there is an irregular rise, more rapid than the rise in employment, until August, 1916, from which there is a decline with some upward movements in each year.

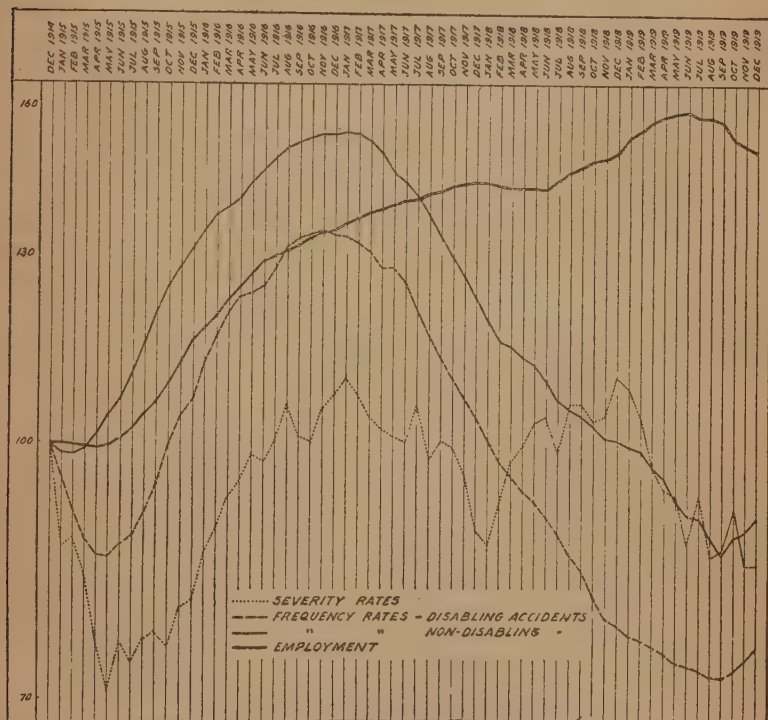
The frequency of disabling accidents runs a somewhat similar course but nowhere departs so widely from January, 1914, as do nondisabling accidents. The high month is August, 1916, from which point there is an irregular decline.

The severity of disabling accidents is much more irregular from month to month and nowhere reaches a level as high as that of Jan-

uary, 1914. The high months are August and November, 1916, February, March, and August, 1918, and July, 1919. This irregularity and the frequent departure from the showing regarding frequency is entirely normal in view of the fact that the comparatively small number of deaths have a controlling influence on the severity rates and the deaths are not distributed regularly.

Chart A shows the percentage variations which occur from month to month. It is desirable to present the same data in a form in which

CHART B.—TREND OF SEVERITY RATES, OF FREQUENCY RATES FOR DISABLING ACCIDENTS, OF FREQUENCY RATES FOR NONDISABLING ACCIDENTS, AND OF EMPLOYMENT, 1914 TO 1919.



the irregularities are "smoothed" and the general trend of events made evident without the confusion due to temporary conditions.

In Chart B the rates are cast up for the years ending with each month, beginning with December, 1914. Each point in the curves resulting from plotting these values therefore represents an entire year and the irregularities seen in Chart A are in a measure eliminated.

A study of Chart B reveals that there was a slight downward trend in employment during the early portion, accompanied by downward movements in each of the three accident curves. This was most pronounced in severity of disabling accident, less so in frequency of disabling cases, and least in nondisabling cases.

Then, from the year ending June, 1915, to that ending June, 1916, employment was rapidly increasing. Each of the accident curves rises with the employment curve, the three pursuing nearly parallel courses, and both frequency curves rising more rapidly than the employment curve. It is known from other studies of the situation that this upward movement in employment involved a high accession rate of men new to the business. The huge demand for steel, which came with the opening of the war, led to taking on any man who offered himself and seemed capable for the physical demands of the task. Such a high accession rate of inexperienced men is always accompanied by increasing accident rates.

From the year ending June, 1916, to that ending January, 1917, the rise in employment continued, but at a less rapid rate. The proportion of inexperienced men introduced is known to be markedly less. The accident curves rise to this point but show the influence of the slackening in accessions. From the year ending January, 1917, the employment curve continues to rise quite steadily but the accident curves begin to decline. In the case of nondisabling and disabling frequency this decline continues to the calendar year 1919.

In the severity curve there appears a striking disagreement with the trend of frequency. While frequency is falling from the year ending January, 1918, severity rises to the year ending December, 1918. From that point irregular decline occurs to the end of 1919.

Chart A presents the fluctuations from month to month and Chart B the general trend over the six years. With this picture in mind it is possible to consider the possible relations of these several curves to war conditions and to suggest some explanations of the phenomena.

It may first be noted that the records embodied in the charts do not go back quite far enough to give all the desirable information. Periods of high industrial activity are necessarily those in which accident rates will tend to rise. During the period from 1906 onward there have been three conspicuous periods of this kind. They are approximately 1906-7, 1912-13, 1916-1918. The death rates per 1,000,000 hours worked, in the mills under consideration, have been since 1910 as follows: 1910, 0.70; 1911, 0.60; 1912, 0.63; 1913, 0.67; 1914, 0.47; 1915, 0.37; 1916, 0.50; 1917, 0.40; 1918, 0.53; 1919, 0.40. It will be observed that these figures have high points in 1910, 1913, and 1918, with depressed intervals between. The important point to be noted is that the prewar high point of 1913 is higher than the war high point of 1918, the proportion being 67 to 53; that is to say, the tendency to rising rates which war conditions brought about was either opposed by more effective safety measures or was intrinsically less than that existing in the prewar period. It may fairly be urged that the explanation is to be found in the improved construction of the new buildings and machinery which were installed in response to the war demand and in the active efforts put forth in training and introducing the new man who had to be employed.

A considerable number of industrial concerns took the position that the demands of war production were so imperative that they were perfectly justified in relaxing attention to safety measures of all sorts. The result is reflected in the increased accident occurrence registered by most agencies. Whether or not this increase brought the rates

generally above the prewar standard is a matter which can not be determined with certainty. It is to the great and lasting credit of the iron and steel industry that it did meet the situation directly and endeavored to combat the inevitable tendency by increased efforts. The final outcome of these various efforts was first to check the rising accident rates and finally to bring them down to points lower than the prewar level.

It is now pertinent to examine the contradiction noted above between the indications afforded by the frequency rates and severity rates for the years ending in the months of 1918. In this portion of the charts, frequency rates both for disabling and nondisabling accidents show a tendency to decline while severity is rising. This condition is of interest from several standpoints. It has often been noted that frequency and severity rates give these opposite indications; indeed, this fact was the moving reason for working out the system of severity rates. It is not often, however, that the contradiction is as pronounced and long continued as in this case. It is clear that the efforts of one sort and another which kept severity below the rate of 1913 and produced a marked decline of frequency after 1916 were after all not so well adapted to meet the severity problem as they were to deal with the problem of minor injury. Severity, it is true, did decline for a time concurrently with frequency but then took a turn in the opposite direction, which continued until the close of the calendar year 1918. From that point the curve again concurs with that of frequency. The extent to which minor injury was controlled in 1918 and the failure equally well to control the severer forms is strikingly brought out by contrasting the years 1915 and 1918, as is done in the following table:

FREQUENCY AND SEVERITY RATES FOR THE MONTHS OF 1915 AND 1918.

Month.	Frequency rates (per 1,000,000 hours exposure).		Severity rates (per 1,000 hours exposure).		Month.	Frequency rates (per 1,000,000 hours exposure).		Severity rates (per 1,000 hours exposure).	
	1915	1918	1915	1918		1915	1918	1915	1918
January.....	32.4	45.7	1.4	4.5	August.....	61.5	41.6	4.2	5.3
February.....	33.3	37.8	3.6	5.6	September.....	62.1	35.7	4.0	3.4
March.....	39.7	44.6	2.6	5.6	October.....	63.9	32.5	3.0	1.7
April.....	44.1	41.5	2.8	4.1	November.....	57.3	31.6	4.5	5.0
May.....	53.3	43.5	.6	3.9	December.....	57.8	31.5	3.6	4.0
June.....	59.3	41.0	4.3	3.9					
July.....	62.7	40.5	1.2	3.1	Total.....	53.2	38.8	3.0	4.1

Inspection of this table will disclose that 9 of the 12 months of 1915 have higher frequency rates than the same months of 1918. On the contrary, 1918 shows higher severity in 9 of the 12 months. Evidently the conditions of the two years were in some way distinctly different. Superficially the differences appear to be that 1915 was a year of rapid changes in the working force and that 1918 was one of relative stability of the workers but of intense industrial activity. In the first condition it is clear that all accident rates tend to rise rapidly. It is the uniform experience that whenever the accession of inexperience is increasing the accident rates tend

strongly to go up, and will do so unless very rigorous measures are taken in opposition.

A reasonable explanation of the rising severity of the years ending in 1918 is much less easy. The greater industrial activity of that year must have had its influence, but knowledge of the plants does not seem to justify placing any great stress upon that factor. The operations of such mills as are here grouped are necessarily of a rather leisurely character and can not in the nature of the case be hurried sufficiently to increase greatly the hazard of the individual man.

It has been suggested that the "flu" epidemic may have so influenced the physical condition of the men that they were more liable to accidental injury. This can scarcely be given great weight, since, though the severity rate of the months when "flu" was most prevalent is higher than the average, it is not higher than that in several other groups of months in which there was no "flu" complication.

This process of exclusion rather forces the conclusion that this is another case where the operators of these mills were led into a mistaken sense of security by the steadily falling frequency rates and so did not maintain full and rigorous attention to the causes of more severe injury. At all events it may be said that without constant attention to the severity rate it is impossible to have an accurate idea of the conditions which must be met.

The rates which form the basis of the foregoing charts and discussion are given in the following tables:

ACCIDENT RATES, BY MONTHS, 1914 TO 1919.

Month.	1914	1915	1916	1917	1918	1919
<i>Frequency rates of nondisabling accidents (per 1,000,000 hours exposure).</i>						
January.....	203	164	293	306	189	175
February.....	190	178	268	255	186	171
March.....	229	252	300	254	232	182
April.....	228	281	329	272	223	178
May.....	239	309	404	303	276	186
June.....	270	327	381	332	281	220
July.....	267	349	404	317	238	230
August.....	263	360	418	311	269	141
September.....	234	358	377	254	221	157
October.....	199	317	341	244	211	302
November.....	165	281	315	223	177	234
December.....	167	279	285	185	173	215
Total.....	222	292	343	272	223	203
<i>Frequency rates of disabling accidents (per 1,000,000 hours exposure).</i>						
January.....	59.0	32.4	66.4	63.8	45.7	37.9
February.....	57.7	33.3	62.0	54.9	37.8	35.5
March.....	61.3	39.7	67.2	56.3	44.6	38.1
April.....	54.5	44.1	62.1	52.9	41.5	38.0
May.....	54.9	53.3	55.5	51.7	43.5	37.0
June.....	53.0	59.3	67.0	50.8	41.0	38.5
July.....	55.6	62.7	81.7	54.6	40.5	39.0
August.....	51.1	61.5	84.7	55.5	41.6	37.9
September.....	44.4	62.1	69.7	46.5	35.7	35.2
October.....	34.9	63.9	69.7	49.6	32.5	36.2
November.....	29.4	57.3	63.1	46.6	31.6	37.3
December.....	37.5	57.8	55.8	35.6	31.5	39.9
Total.....	50.0	53.2	66.9	51.5	38.8	37.7
<i>Severity rates of disabling accidents (per 1,000 hours exposure).</i>						
January.....	7.5	1.4	3.9	5.3	4.5	3.5
February.....	3.4	3.6	4.6	3.2	5.6	3.5
March.....	4.6	2.6	4.5	3.1	5.6	2.2
April.....	5.9	2.8	3.9	3.2	4.1	2.7
May.....	2.7	.6	2.5	2.1	3.9	3.4
June.....	2.0	4.3	3.7	3.5	3.9	1.2
July.....	2.0	1.2	2.7	5.5	3.1	6.0
August.....	3.5	4.2	6.5	2.2	5.3	1.7
September.....	3.7	4.0	2.4	3.5	3.4	4.0
October.....	4.0	3.0	2.5	2.6	1.9	4.3
November.....	3.0	4.5	6.6	4.4	5.0	2.0
December.....	2.9	3.6	4.5	1.5	4.0	4.1
Total.....	3.8	3.0	4.0	3.3	4.1	3.2

ACCIDENT RATES, BY YEARS ENDING WITH EACH MONTH.

Year ending with—	Rates for year ending with specified month.					
	1914	1915	1916	1917	1918	1919
<i>Frequency rates of nondisabling accidents (per 1,000,000 hours exposure).</i>						
January.....		219	299	344	263	221
February.....		218	307	343	256	219
March.....		220	310	339	255	215
April.....		225	314	334	251	211
May.....		231	322	326	248	205
June.....		237	327	322	243	201
July.....		245	332	315	236	200
August.....		255	337	306	233	195
September.....		267	339	296	230	189
October.....		277	341	288	227	195
November.....		285	343	280	223	176
December.....	222	292	313	272	223	200
<i>Frequency rates of disabling accidents (per 1,000,000 hours exposure).</i>						
January.....		47.8	55.8	66.7	50.0	28.2
February.....		45.6	58.0	66.1	48.6	28.0
March.....		43.7	60.1	65.2	47.7	37.6
April.....		42.7	61.4	63.7	46.8	37.3
May.....		42.7	61.5	63.9	46.1	36.7
June.....		43.4	62.2	62.5	45.2	36.5
July.....		41.2	63.8	60.3	44.0	36.3
August.....		45.4	65.8	58.0	42.8	36.0
September.....		47.1	66.4	56.1	41.8	35.9
October.....		49.6	66.7	54.6	40.3	36.3
November.....		51.7	67.2	53.2	39.1	36.7
December.....	50.0	53.2	66.9	51.5	38.8	37.5
<i>Severity rates of disabling accidents (per 1,000 hours exposure).</i>						
January.....		3.3	3.2	4.1	3.3	4.1
February.....		3.3	3.3	4.0	3.5	3.9
March.....		3.1	3.5	3.9	3.7	3.6
April.....		2.9	3.6	3.8	3.7	3.5
May.....		2.7	3.7	3.8	3.9	3.5
June.....		2.9	3.7	3.8	3.9	3.3
July.....		2.8	3.8	4.0	3.7	3.5
August.....		2.9	4.0	3.7	4.0	3.2
September.....		2.9	3.8	3.8	4.0	3.2
October.....		2.8	3.8	3.7	3.9	3.4
November.....		3.0	3.9	3.6	3.9	3.2
December.....	3.8	3.0	4.0	3.3	4.1	3.2

Departments of the Industry Manufacturing Various Products.

THE foregoing discussion illustrates the trend of accident rates in the basic departments of the industry. It will be of interest to determine whether the same forces were at work in other departments and to what extent the results were the same.

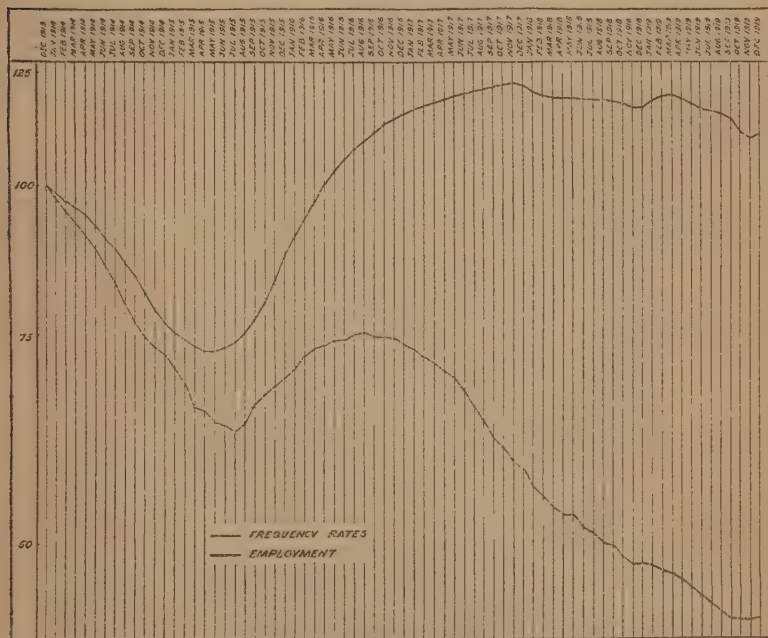
The plants for which it is possible to follow the details of war-time experience employed during the seven years which are covered a number of men varying from 110,000 to 186,000. The groups into which this total will be analyzed in seeking to determine the war-time experience in manufacturing various products are sufficiently

large to afford reasonable confidence that they represent typical conditions.

Chart C exhibits the trend of employment and of accident frequency rates in the entire group of plants from the year ending December, 1913, to that ending December, 1919.

The year 1913 as before noted was one of high industrial activity. Both in that particular and in the matter of accident rates the year formed a peak in the curves representing conditions. Following 1913 employment declined to the year ending May, 1915, and accident

CHART C.—TREND OF FREQUENCY RATES AND OF EMPLOYMENT FOR THE IRON AND STEEL INDUSTRY, 1913 TO 1919.

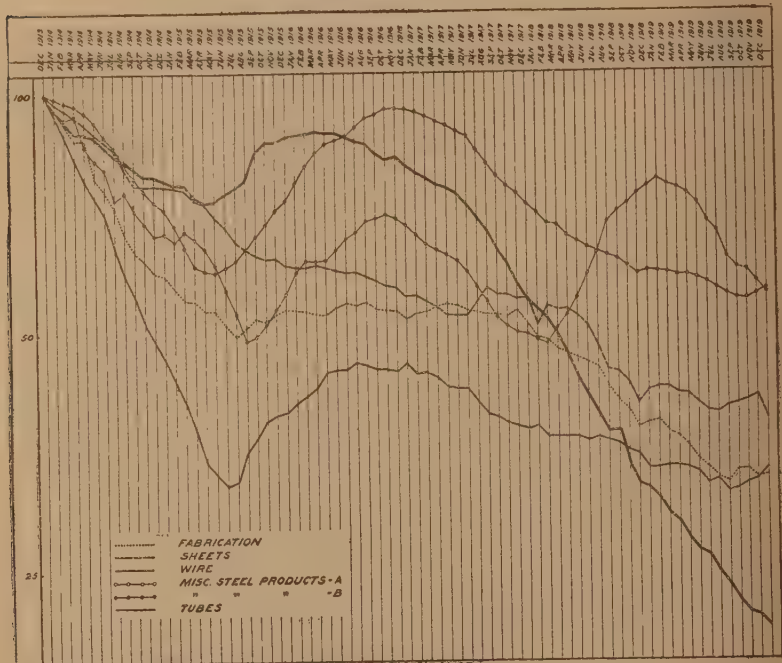


rates to the year ending July, 1915. Employment was increasing from that year until that ending November, 1917. A decline then began which was still in progress in the year ending December, 1919. Accident frequency increased from the year ending July, 1915, to the year ending August, 1916, and then while employment was still rising began to decline and continued so to do to the year ending December, 1919. It will be seen that this was in substantial agreement with what happened in the smaller group already considered.

The component parts of this total are presented in Chart D. It presents two groups of mills which produce miscellaneous steel products and one group of mills producing sheets and tin plate, wire products, tubes, and fabricated products.

Five of the six show a declining accident frequency to a year ending in some month about the middle of 1915. The sheet mills are unique among these production groups in that they show a declining accident frequency with only minor irregularities from the year ending December, 1913, to the year ending December, 1919. The other five groups have a rising frequency rate from a year ending near the middle of 1915 to a year ending with some month in 1916, varying from March to December. From that point there is a

CHART D.—TREND OF FREQUENCY RATES IN THE MANUFACTURE OF SPECIFIED PRODUCTS, 1913 TO 1919.



continuous, though not perfectly regular, decline to the year ending December, 1919, except in one case. One of the two groups which produce miscellaneous steel products has a second low point in the year ending February, 1918, from which a rise occurs until the year ending January, 1919. The second peak is slightly higher than the first.

It is evident that in all essential particulars the experience of these diverse production groups is the same as that in the fundamental departments. The rate tables on which the charts are founded follow.

FREQUENCY RATES PER 1,000,000 HOURS EXPOSURE FOR SPECIFIED PRODUCTS.

Year ending with—	Fabi- cated products.	Sheets.	Wire products.	Tubes.	Miscellaneous steel products.		Total.
					Group A.	Group B.	
December, 1913.....	100.3	61.6	59.3	27.2	70.9	41.3	60.3
January, 1914.....	96.2	59.9	56.5	25.6	70.1	39.4	58.7
February, 1914.....	92.2	58.9	54.7	24.0	69.3	38.5	57.3
March, 1914.....	87.9	57.7	53.1	22.5	68.6	38.9	56.1
April, 1914.....	88.2	56.6	53.1	21.2	67.3	35.3	54.7
May, 1914.....	78.7	55.0	52.5	20.1	65.5	34.2	53.2
June, 1914.....	75.5	53.7	51.0	19.1	62.8	33.3	51.6
July, 1914.....	71.9	52.4	49.6	17.3	60.6	30.4	49.9
August, 1914.....	66.7	49.4	48.9	16.0	57.8	31.0	47.9
September, 1914.....	63.2	47.4	48.0	15.0	55.7	29.4	46.3
October, 1914.....	61.6	47.2	46.8	13.9	53.5	28.4	45.0
November, 1914.....	59.5	47.3	46.7	13.2	51.8	27.4	44.0
December, 1914.....	59.0	47.2	46.2	12.5	50.7	27.6	43.5
January, 1915.....	57.0	46.9	45.4	11.8	48.4	26.9	42.4
February, 1915.....	55.1	46.6	45.4	11.1	45.4	27.7	41.0
March, 1915.....	55.0	45.1	43.7	10.2	43.5	27.1	39.3
April, 1915.....	53.3	44.7	43.2	9.3	42.3	26.4	39.1
May, 1915.....	53.3	43.0	43.3	9.0	42.1	25.1	38.3
June, 1915.....	51.2	41.8	44.3	8.7	42.7	23.3	38.0
July, 1915.....	49.3	40.0	45.1	8.8	43.5	21.8	37.6
August, 1915.....	50.9	39.0	46.2	9.6	45.0	20.1	38.1
September, 1915.....	52.2	38.5	49.9	10.0	46.8	20.4	39.5
October, 1915.....	51.8	38.0	51.4	10.5	48.5	21.0	40.3
November, 1915.....	53.0	38.1	51.5	10.7	50.4	22.1	40.9
December, 1915.....	53.5	37.3	52.4	10.8	51.9	23.0	41.5
January, 1916.....	53.4	37.0	52.6	11.1	54.7	24.5	42.4
February, 1916.....	53.3	37.0	52.8	11.3	57.5	25.4	43.3
March, 1916.....	52.8	37.3	53.3	11.6	59.8	25.3	43.9
April, 1916.....	52.7	37.1	52.9	12.1	61.2	25.4	44.2
May, 1916.....	53.9	36.8	52.9	12.2	62.0	26.1	44.6
June, 1916.....	54.5	36.5	52.2	12.2	62.7	27.0	44.7
July, 1916.....	54.1	36.6	51.5	12.4	64.3	27.5	45.1
August, 1916.....	54.7	36.1	51.1	12.3	66.0	28.5	45.4
September, 1916.....	53.5	35.7	49.7	12.2	66.7	28.7	45.2
October, 1916.....	53.4	35.2	48.9	12.2	67.6	29.0	45.0
November, 1916.....	52.4	34.9	49.3	12.1	67.9	28.7	44.9
December, 1916.....	52.1	34.0	48.2	12.4	67.6	28.2	44.4
January, 1917.....	52.9	34.1	47.1	12.0	67.2	27.4	43.9
February, 1917.....	53.1	33.6	46.4	12.1	66.5	26.6	43.4
March, 1917.....	54.0	33.1	45.5	11.9	65.5	26.2	42.8
April, 1917.....	54.3	32.3	45.0	11.6	64.6	25.8	42.2
May, 1917.....	54.0	32.2	44.2	11.5	63.6	25.3	41.6
June, 1917.....	53.3	32.3	42.6	11.5	62.2	24.5	40.5
July, 1917.....	53.1	33.6	41.0	11.1	60.2	23.5	39.4
August, 1917.....	52.7	34.9	39.5	10.7	57.9	22.5	38.3
September, 1917.....	52.7	34.2	37.2	10.6	55.8	21.5	37.0
October, 1917.....	52.5	34.2	36.0	10.4	54.2	21.0	36.2
November, 1917.....	53.2	33.8	33.9	10.3	52.9	20.6	35.3
December, 1917.....	51.3	33.9	32.5	10.2	51.3	20.5	34.5
January, 1918.....	49.1	32.0	31.6	10.3	49.9	20.1	33.6
February, 1918.....	48.7	33.1	30.7	10.0	48.6	20.0	32.9
March, 1918.....	47.4	32.7	29.1	10.0	47.6	20.8	32.3
April, 1918.....	46.9	32.7	27.6	10.0	46.7	21.6	31.9
May, 1918.....	46.3	32.3	25.8	10.0	46.0	22.7	31.8
June, 1918.....	45.7	31.3	24.6	9.9	45.2	24.3	31.1
July, 1918.....	45.1	29.4	23.4	10.0	44.5	25.9	30.7
August, 1918.....	42.6	27.5	22.1	9.9	44.0	28.3	30.2
September, 1918.....	40.8	27.4	21.2	9.8	43.5	29.2	29.9
October, 1918.....	40.0	26.5	19.9	9.6	42.6	29.9	29.2
November, 1918.....	37.8	24.9	19.0	9.5	41.7	30.7	28.9
December, 1918.....	38.2	25.9	18.8	9.1	42.0	31.4	28.8
January, 1919.....	38.5	26.1	18.2	9.1	41.9	32.1	28.9
February, 1919.....	37.3	26.1	17.4	9.2	41.8	31.5	28.6
March, 1919.....	36.8	25.7	17.0	9.2	41.5	31.2	28.3
April, 1919.....	35.8	25.6	16.2	9.1	41.5	30.7	28.1
May, 1919.....	34.4	24.9	15.7	9.0	41.1	29.9	27.6
June, 1919.....	33.6	24.4	15.4	8.7	40.7	28.4	27.1
July, 1919.....	32.7	24.2	14.7	8.8	40.0	27.6	26.7
August, 1919.....	32.3	24.7	14.2	8.5	39.2	25.5	26.2
September, 1919.....	33.3	24.8	13.5	8.6	38.8	24.7	25.9
October, 1919.....	33.3	25.1	13.1	8.7	38.7	24.5	25.9
November, 1919.....	32.6	25.5	12.9	8.8	39.2	23.7	26.0
December, 1919.....	32.8	23.8	12.5	9.1	39.7	23.0	26.1

FREQUENCY RATES PER 1,000,000 HOURS EXPOSURE FOR SPECIFIED PRODUCTS—
Concluded.*Number of workers.*

Year ending with—	Fabri- cated products.	Sheets.	Wire products.	Tubes.	Miscellaneous steel products.		Total.
					Group A.	Group B.	
June, 1914.....	8,817	16,841	25,575	19,944	41,744	18,922	137,816
June, 1915.....	6,706	15,759	22,434	13,329	35,670	13,477	111,794
June, 1916.....	8,276	21,906	31,377	21,031	45,673	23,000	160,819
June, 1917.....	10,110	25,504	32,928	24,880	49,893	27,045	182,587
June, 1918.....	10,349	25,939	30,393	23,787	50,803	24,289	180,204
June, 1919.....	9,904	22,685	29,324	23,871	50,652	26,906	176,867

Fluctuation in Rates for Causes.

IT HAS been shown that certain very definite characteristics can be traced in the curves which represent the trend of accident rates over the war period. It is possible to examine the situation from another point of view. If the rates for the various causes be determined it will be possible to observe whether the indications from the groupings already presented are repeated in the various cause groups.

The following table shows the main cause groups:

ACCIDENT FREQUENCY RATES PER 1,000,000 HOURS EXPOSURE, IN THE IRON AND
STEEL INDUSTRY, BY CAUSES.

Cause.	1913	1914	1915	1916	1917	1918	1919
Working machines.....	3.8	2.7	2.6	2.6	2.0	1.8	1.4
Cranes.....	3.5	2.3	2.3	2.8	2.5	2.2	1.9
Vehicles.....	2.3	1.9	1.6	1.7	1.7	1.3	1.2
Hot substances.....	5.4	3.6	3.7	4.5	3.6	3.0	2.8
Falls of person.....	4.5	4.1	3.5	3.7	3.2	2.8	2.8
Falling material, not otherwise specified.....	1.2	.7	.7	.6	.4	.3	.4
Handling tools and material.....	26.7	19.4	20.6	21.5	15.7	12.8	11.7
Other causes.....	12.9	8.8	6.5	7.0	5.4	4.6	4.1
Total, all causes.....	60.3	43.5	41.5	44.4	34.5	28.8	26.3

It will be found that in practically all the cause groups there is a decrease after 1913 into the years 1914 and 1915, followed by increase to a peak in 1916, followed by further decline. The handling of tools and material produces more accidents than any other single group of causes. The rates per 1,000,000 hours exposure for each year beginning with 1913 are 26.7, 19.4, 20.6, 21.5, 15.7, 12.8, and 11.7. Inspection of this series discloses the characteristic high point in 1916.

It is possible to recapitulate and summarize the facts of the war period and the explanations which may be offered of the course of events. It may be noted that—

1. Whatever form of classification is used (the fundamental departments, production groups, or cause groups) the same trend is shown.

2. The period just prior to the war was a period of industrial decline. Employment went down, "labor mobility" almost ceased. Accident rates dropped more rapidly than employment.

3. As soon as the effect of European war orders began to be felt in this country employment began to increase. The accession of inexperienced men increased even more rapidly. Accident rates went up.

4. The iron and steel industry was alarmed by the increasing accident occurrence and undertook a strenuous counter campaign.

5. This was very successful in controlling and finally causing a decline in minor injury.

6. Major injury was not controlled so perfectly but was prevented from rising above the level of 1913 and was finally considerably reduced.

This review of the war period strongly supports the contention that even in the most strenuous times it is possible to hold in check the tendency to rising accident rates by the application of the three cardinal methods of the safety movement: (1) Adequate instruction of the men in skillful methods of work; (2) careful supervision of the well-instructed men; (3) "engineering revision," by which the safety of work places is increased.

Coal-Mine Accidents in the United States in Six Months Ending January, 1920.

ACCORDING to a statement recently issued by the United States Bureau of Mines, there was a gratifying decrease in the number of men killed in the coal mines of the United States during the six months ending January, 1920, as compared to the quantity of coal produced.

During July last year, when 221 men lost their lives, the production of coal was over 50,000,000 tons. In January, 1920, the production had increased to 56,000,000 tons, or 12 per cent, while the fatalities, instead of increasing proportionately, actually decreased to 188, or nearly 15 per cent. Nor is this decrease a mere accident or coincidence peculiar to the month of January, as may be seen from the following table:

PRODUCTION OF COAL, NUMBER OF FATALITIES, AND FATALITIES PER MILLION TONS MINED, IN COAL MINES OF UNITED STATES, JULY, 1919, TO FEBRUARY, 1920.

Month.	Production (short tons).	Men killed.	Number killed per million tons.
July, 1919.....	50,501,000	221	4.33
August, 1919.....	50,805,000	223	4.39
September, 1919.....	54,735,000	179	3.27
October, 1919.....	54,702,000	243	3.76
November, 1919.....	26,389,000	94	3.56
December, 1919.....	44,527,000	169	3.80
January, 1920.....	55,043,000	188	3.35

From the figures shown above it may be observed that the average monthly production for January and the five months immediately preceding was 49,500,000, or only 2 per cent below that for July, while the average number of men killed was 183, or a decrease of over 17 per cent.

The month of July, 1919, has been used as the base for this comparison because it is fairly representative of the average number of men killed each month since 1911. It will be noted that during the six months ending with January, 1920, the accidents have by no means kept pace with the increasing production of coal, and that during the coal strike last November the decline in the output of coal was accompanied by an even greater decline in the number of lives lost.

Metal-Mine Accidents in the United States During 1918.

THE RECENT report of the United States Bureau of Mines on Metal-mine accidents in the United States during the calendar year 1918 (Technical Paper 252) opens with the statement that the returns for the year show the lowest fatality rate recorded since the bureau began the collection of accident statistics in 1911, and that the number of nonfatal injuries was slightly less than in 1917 in spite of war conditions and labor shortage. Reports from 3,636 operators (about 1,000 less than in 1917) give a total of 182,606 employees as compared with 200,579 in 1917. In addition, the metallurgical works (not including iron and steel) reported 79,752 men in 1918 as compared with 84,042 in 1917.

There were 646 fatalities in metal mines in 1918; in 1917 there were 852. The fatality rate in 1918 is 3.57 per 1,000 300-day workers as compared with the normal rate of 3.60 for 1917 and 3.62 for 1916. The 1918 rate, it is stated, is the lowest recorded since 1911, when it was 4.45.

The report shows a total of 42,915 nonfatal injuries at metal mines, which is a decrease of 3,371 from 1917, the accident rate being 237.09 per 1,000 300-day workers as compared with 240.97 in 1917, and 250.64 in 1916.

The tables in the report represent the five divisions of the mining industry, as follows: Copper mines, 524 operators; gold, silver, and miscellaneous mines, 2,429 operators; iron mines, 176 operators; lead, and zinc mines (Mississippi Valley), 236 operators; nonmetallic mineral mines (not including coal), 271 operators.

It is explained that as many of the States now have compensation laws the bureau's classification of serious and slight injuries is on a 14-day (2 week) basis in order to conform to the classification used by the States. The classification of injuries includes three types, as follows:

FATAL, SERIOUS, AND SLIGHT INJURIES IN METAL MINES IN THE UNITED STATES
IN 1917 AND 1918.

Injury.	1917	1918	Per cent of decrease.
Fatal.....	852	646	21.2
Serious (time lost more than 14 days):			
Permanent disability—			
Total ¹	39	62	² 58.9
Partial ³	666	640	3.9
Others.....	10,220	9,066	11.3
Slight (time lost, 1 to 14 days, inclusive).....	35,361	23,147	6.3
Total.....	46,286	42,915	7.3

¹ Permanent total disability is loss of both legs or arms, one leg and one arm, total loss of eyesight, paralysis, or other condition permanently incapacitating the workman from engaging in a gainful occupation.

² Increase.

³ Permanent partial disability means loss of one foot, leg, hand, eye, one or more fingers, one or more toes, any dislocation where ligaments are severed, or any other injury known in surgery to be permanent partial disability.

The following table shows the number of employees, the number of fatalities and injuries, and the fatal and nonfatal accident rates, by kind of mine, during 1917 and 1918.

NUMBER EMPLOYED, NUMBER KILLED AND INJURED, AND FATAL AND NONFATAL
ACCIDENT RATES IN MINES DURING THE YEARS 1917 AND 1918.

Kind of mine.	Active operators.	Number of men employed.	Average days worked.	Number killed.	Number injured (time lost more than 1 day).	Number 300-day workers.	Killed per 1,000 300-day workers.	Injured per 1,000 300-day workers.
1917.								
Copper.....	649	61,275	312	374	19,935	63,619	15.88	313.35
Gold, silver, and miscellaneous metal.....	3,166	51,892	281	196	8,385	48,606	4.03	172.51
Iron.....	205	57,230	283	191	12,278	53,960	3.54	227.54
Lead and zinc (Mississippi Valley).....	369	20,269	246	68	4,544	16,644	4.09	272.99
Nonmetallic mineral.....	248	9,913	280	23	1,144	9,256	2.48	123.58
Total.....	4,637	200,579	287	852	46,286	192,085	4.44	240.97
1918.								
Copper.....	524	59,447	321	220	20,513	63,681	3.45	322.12
Gold, silver, and miscellaneous metal.....	2,429	43,643	197	181	7,847	42,375	4.27	185.18
Iron.....	178	53,665	290	179	9,621	51,878	3.45	185.45
Lead and zinc (Mississippi Valley).....	236	14,004	251	47	3,746	11,723	3.58	319.54
Nonmetallic mineral.....	271	11,847	287	19	1,188	11,349	1.67	104.69
Total.....	3,636	182,606	297	646	42,915	181,006	3.57	237.09

¹ Excluding the deaths from the North Butte mine fire, the fatality rate was 3.34 per 1,000, the lowest on record for the copper group.

The causes of accidents are shown in the report in considerable detail. Comparative data for accidents at metal mines, coal mines, and quarries are given.

INDUSTRIAL POISONS.

Tellurium as an Industrial Health Hazard.

A STUDY of tellurium was recently made by Dr. Shie and Dr. Deeds, of the United States Public Health Service; the results were published in Public Health Reports (Apr. 16, 1920, pp. 939-954), in a preliminary report, the purpose of which is "to invite the attention of industrial hygienists and physicians to the importance of tellurium as an industrial health hazard."

The possibility that this substance might act as an industrial poison first came to the attention of the authors in 1918 while they were making a study of lead poisoning in an electrolytic lead refinery. It was noted that practically all the men employed in one department—13 in number—smelled strongly of garlic and, upon being questioned, complained of dry skin and a loss of the sweat function. These men were working in the silver refinery around blast furnaces and were subjected to high temperatures. The slime from the electrolytic tanks was treated to remove the Doré metal, and tellurium was encountered as an impurity. The temperature attained in the blast furnaces was about 1,200°-1,400° F., and tellurium fumes were given off probably in the form of hydrogen telluride, a compound analogous to sulphuretted hydrogen and arseniuretted hydrogen. Tellurium was also present in the dust about the furnaces, probably in the form of the oxide and telluride. No other men in the plant complained of similar symptoms, and no others came into contact with tellurium.

The 13 men were examined with the following result: Seven showed evidences of tellurium absorption as indicated by garlic odor to the breath, sweat, and urine, to dryness of the mouth, and metallic taste. Five of these had a considerable inhibition of the sweat function, and the two who did not, had worked only two weeks; three of the five had a dry, itching skin, anorexia, nausea, some vomiting, and some degree of depression or somnolence. Six of the men examined had a rash distributed quite generally over the body, and "it is probable that the dry skin, incident to the complete or partial suppression of the sweat function, had something to do with its inception." The length of time the men examined had been employed was, in the majority of cases, very short, so that in a number of cases there had hardly been time enough for the mild chronic effects of tellurium to have developed, and the one who had worked in the department for the longest period—two and a half years—had been exposed to the hazard only at rare intervals.

Chemistry and Properties of Tellurium.

THE paper considers the chemistry of tellurium, which in the past was scarce, the only method of obtaining it being a very lengthy one of extraction applied to large masses of ores. It is now obtained from the dross produced in electrorefining. In this process the slime which settles to the bottom of the electrolytic tanks is treated to

recover the more precious metals, and the residuum is then treated to obtain the tellurium. It may also be prepared from its minerals or from the residue in several metallurgical processes.

Tellurium is a bluish-white silverlike element possessing metallic luster. It is a poor conductor of heat and electricity. It melts at 452°C . When slowly cooled from the molten state it forms hexagonal rhombohedral crystals, isomorphous with sulphur and selenium. In physical properties it resembles the metals, but in chemical properties it is decidedly nonmetallic. It forms one of the oxygen family of elements and is closely related to sulphur and selenium of the same family.

Summary.

AFTER a consideration of the poisonous properties of tellurium, based upon the 13 cases examined and upon experimental work, the paper concludes with this summary to which a "fairly complete" bibliography of the subject is added:

Until within recent years tellurium was considered only as more or less of a chemical curiosity. With the development of the electrolytic-refining industry, however, its production has increased, and it can no longer be considered a rare element. As yet no very important industrial use has been found for it; but numerous research organizations, among them the National Research Council, are attempting to discover ways in which it can be used on a large scale in industry. At present at least one large corporation has erected a plant for the sole purpose of isolating and refining tellurium. With the further development of such activities it is to be expected that the production of tellurium will greatly increase and that concomitantly there will be an increase in the health hazard incident to the increased exposure of the workers. We might then expect to encounter the severe effects of tellurium poisoning, such as are now manifested by laboratory animals under the influence of fairly large doses of tellurium.

The tellurium poisoning encountered thus far in industry has not been severe. The primary effects are suppression of the sweat, of the saliva, and of the acid in the gastric juice. This leads to a dry, itching skin, dry mouth, metallic taste, anorexia, nausea, vomiting, indigestion, and constipation. Somnolence is often a prominent symptom. The earliest symptom of tellurium absorption is the garlic odor to the secretions and excretions due to methyl telluride. Secondary effects to be expected are impaired nutrition with emaciation and, where the workers are exposed to high temperatures, increased susceptibility to heat exhaustion.

The diagnosis of tellurium poisoning may be made from the garlic odor of the excretions, the suppression of the sweat, the dryness of the mouth, and the demonstration of tellurium in the urine or feces.

The preventive measures are similar to those used for other metallic poisons and may be summed up as good working conditions and proper personal hygiene.

In treatment, of course, the most important measure is the removal of cause. After that pilocarpin may be used to counteract the effect of the tellurium, and the avenues of elimination should be opened and excretion favored by promoting secretions, diuresis, and free bowel movements. Hydrochloric acid may be administered to remedy the deficiency of acid secretion. The remainder of the treatment is symptomatic.

The prognosis so far has been good, the condition gradually improving upon prompt removal of the cause. This is due to the fact that no serious cases have thus far been encountered. It is thought that the prognosis will be less favorable when more severe poisoning occurs as a result of greater absorption of tellurium incident to its increased production.

The 13 workers reported are still under observation and physical examinations will be made from time to time to observe their condition. New workers in the department will also be closely watched. Along with this, laboratory work is being done to determine more accurately the toxicity of tellurium and its effects upon the blood, blood pressure, kidneys, etc.

It is hoped that samples of the air which the men breathe may be collected while they work, so that determinations of the amount of tellurium taken into the lungs may be determined. Similar determination of the amounts ingested would also be of value, and it is expected that they will be made.

Hexamethylene-tetramine as a Poison in the Rubber Industry.

THE rash produced by hexamethylene-tetramine upon workers in the rubber industry and a means of prevention are discussed in a paper published in the *Journal of Industrial Hygiene*¹ as a reprint from the *India Rubber World*, of November 1, 1919.

The paper gives the results of a study made by the research laboratory of the Firestone Tire & Rubber Co., Akron, Ohio, of organic accelerators of vulcanization. Special attention was given to the subject of toxicity with the purpose of finding an accelerator which combines excellent acceleration with a minimum of toxic action, and the authors state that "Knowing that many rubber companies are using hexamethylene-tetramine or 'urotropin,' it was thought that a study of the toxicology of this substance would be of interest not only to ourselves, but also to those who are already using this accelerator." The investigation was extended to cover the probable cause of its action and to find, if possible, an antidote or simple means of prevention.

The paper refers to a report of an investigation into the toxic properties of the more commonly used accelerators presented in September, 1918, by the committee on organic accelerators of the rubber section of the American Chemical Society, in which the action of hexamethylene-tetramine was summarized as follows:

Symptoms of poisoning.—Rash and inflammation of skin which has been in repeated contact with stock containing this material. In severe cases, blisters filled with watery fluid result.

Antidote.—Cleanliness and care in regard to clothing are the best preventives. Change of occupation will cause the rash to disappear, leaving no permanent effects.

In order to study the nature of the irritation ascribed to this accelerator, the tetramine was applied in powdered form and in water solution to different parts of the body of men selected for these tests. The results of the experiment were negative and the accelerator was then introduced into a factory compound in order to study its effect upon actual working conditions, the workmen handling the experimental stock being carefully observed. This test was begun in cool weather and for some time no deleterious effect was observed. With the approach of warmer weather, however, the action of the hexamethylene-tetramine began to manifest itself, usually appearing first as a rash on the wrist or forearm and in many cases remaining confined to these parts, but in others spreading to the face and neck, especially around the eyes, and occasionally appearing on the shoulders, legs, and even across the stomach. The authors concluded that perspiration undoubtedly plays an important part in the production of the rash, as it became almost epidemic with the rise in temperature.

Sodium Bicarbonate in Prevention and Treatment.

THE account of the use of sodium bicarbonate in the treatment of this rash upon men selected for tests is given in detail, and the authors state:

¹ Poisons in the rubber industry. By Norman A. Shepard and Stanley Krall. In *Journal of Industrial Hygiene*, Boston, May, 1920, pp. 33-38.

On the strength of these results bicarbonate solution was provided, so that all the men handling the raw stock containing the hexamethylenetetramine could obtain it if troubled with this rash. Though it was not possible to obtain as accurate data on all those applying the solution, the reports obtained from both the foremen and the men using the solution were very encouraging. * * *

While it is true that the necessity for the application of any preventive or prophylactic solution, such as bicarbonate of soda or borax, is a serious drawback to the use of a substance as an accelerator, it does not prohibit its use. It offers a better solution of the difficulty certainly than that offered by the committee on accelerators. "Change of occupation," with the entailed loss of wages and curtailed production, can scarcely be considered a satisfactory antidote, either from the standpoint of the employee or employer.

It was found that the use of the bicarbonate solution is attended by no disagreeable results, except a considerable smarting when first applied to a severe case, and that it can be applied to the face and neck and even around the eyes with perfect safety. While it has an apparent curative effect, it is stated to be unquestionably chiefly preventive, the result being that while further development of the rash is prevented the old rash is allowed to heal without further infection. The authors believe that, while their observations are based upon a comparatively small number of cases, "the results seem to justify the conclusion that bicarbonate can be used successfully in controlling the hexamethylene-tetramine rash."

Industrial Blood Poisons in Anilin Manufacture.

"INDUSTRIAL blood poisons" is the title of an article by C. R. Newton, in the Journal of the American Medical Association, Chicago, April 24, 1920 (pp. 1149, 1150), which is based on a first-hand study of 8 cases of benzene and anilin intoxication selected from a number of cases occurring in anilin manufacture during the early days of the war before the manufacturing methods were improved; this was followed by a study of 10 cases subject to more or less exposure to benzene, made for the purpose of determining the cumulative properties of this poison. The following is the history of a typical case:

Mr. A., chemist, aged 30, in charge of operations, who had been working intensively in benzene for about two weeks, complained, June 12, 1916, of headache, anorexia, lassitude, and loss of weight. Suddenly pain in the abdomen developed, accompanied by nausea and vomiting. Physical examination detected nothing abnormal. Temperature and pulse were normal. An examination of the blood, however, revealed a marked leucopenia. The blood was normal in color, but seemed to be lacking in viscosity. There were 5,760,000 red blood cells per cubic millimeter; 1,200 white blood cells; hemoglobin, 85 per cent (Sahli). The differential count revealed: Large mononuclears, 39 per cent; small mononuclears, 0; polymorphonuclears, 54 per cent; eosinophils, 0; transitionals, 0.6; other cells, 0; total, 93.6 per cent.

The intoxication in this case was largely from inhalation. Aside from the blood findings, the physical picture is that of a nervous dyspepsia, which was probably true in this case, as the man was of a nervous temperament and anxious over the responsibility of his position.

After a month's leave of absence with complete rest, the leucocyte count became normal and the patient made a complete recovery. It was not our observation that a leucopenia alone, of the severity herein described, would cause symptoms.

The author states it as his opinion—

Not that benzene and its amino-derivatives possess any very definite cumulative action, but that the anemias of which they are the cause follow a definite intoxication

or a series of definite intoxications. It remains to be determined, however, whether or not the constant inhalation of even minute quantities of benzene vapor from spreading machines, cement cans, and other sources would tend to interfere with proper oxygenation of the blood and tissues, even when there is no cell destruction, and thus undermine the worker's resistance to disease.

The following conclusions are reached:

1. Workers chronically exposed to benzene may show leucopenia without any other symptoms, and make complete recovery.
2. Acute exposure to anilin and nitrobenzene vapors produced cyanosis with destruction of the red blood corpuscles, but with little change in the white corpuscles with recovery. In one case in which free benzene was presumably present, there was destruction of white cells without appreciable destruction of red cells, and a more rapid recovery, that is, in three days.
3. The maximum white cell destruction by benzene, and the maximum red cell destruction by anilin-nitrobenzene, may not be reached for several hours after the onset of the symptoms.
4. Workers exposed for long periods to benzene may not have a leucopenia; apparently, therefore, the action is not cumulative.

WORKMEN'S COMPENSATION.

Constitutionality of Amendment to Judicial Code as to Maritime Injuries.

ON MAY 17, 1920, the United States Supreme Court handed down a decision involving the much disputed point of conflict between Admiralty jurisdiction in maritime cases and the jurisdiction of the State workmen's compensation laws. The decision was rendered in the case of *Knickerbocker Ice Co. v. Stewart* (40 Sup. Ct. —), which was brought to the Supreme Court on a writ of error from a decision of the Court of Appeals of the State of New York. In this case William Stewart, while employed by the Knickerbocker Ice Co. as a bargeman, and while he was doing work of a maritime nature, fell into the Hudson River and was drowned. His widow elected to take compensation under the State workmen's compensation act and the State industrial commission allowed an award. The employer appealed from this award, first to the appellate division of the New York Supreme Court and thence to the court of appeals, but in each case the award of the industrial commission allowing compensation was affirmed. Thereupon the employer took the case to the United States Supreme Court on a writ of error. The Supreme Court reversed the decision of the New York Court of Appeals and remanded the case for further proceedings not inconsistent with its opinion. A dissenting opinion was rendered by Mr. Justice Holmes in which Justices Pitney, Brandeis, and Clarke concurred. These same justices dissented in the opinion handed down in the case of *Southern Pacific Co. v. Jensen*, 244 U. S. 205, 37 Sup. Ct. 524. (See MONTHLY REVIEW for July, 1917, pp. 100-103.)

The constitutionality of the New York compensation act was assailed in the United States Supreme Court in the *Jensen* case, in which the State courts had affirmed an award for maritime injuries, and the law was declared unconstitutional because it compulsorily included employers engaged in maritime work as well as those engaged in industrial enterprises. This inclusion of maritime cases was held to be an invasion of the exclusive jurisdiction vested in the Federal courts under section 2, Article III, of the United States Constitution and clause 3, sections 24 and 256, of the Federal Judicial Code. Subsequent to the decision rendered in the *Jensen* case Congress amended clause 3 of section 256 of the Judicial Code, which contains a saving clause allowing suitors to choose whether to sue in admiralty or at common law, by adding thereto the following: "and to claimants the rights and remedies under the workmen's compensation laws of any State," making the third clause read as follows:

The District Court shall have original jurisdiction as follows:

Third. Of all civil causes of admiralty and maritime jurisdiction, saving to suitors in all cases the right of a common-law remedy where the common law is competent to give it, and to claimants the rights and remedies under the workmen's compensation law of any State.

The Knickerbocker Ice Co. in this case contended that the New York workmen's compensation law did not in any way apply to it notwithstanding the amendment to the Judicial Code above quoted. It based its case almost entirely upon the decision in the Jensen case and maintained that Congress had no authority to make the workmen's compensation laws of any State applicable to admiralty or maritime cases. In this contention the company was upheld by the Supreme Court, which declared the aforementioned amendment to the Judicial Code unconstitutional and void. Mr. Justice McReynolds, who rendered the majority opinion, said in part:

The act [amendment to clause 3, section 256, Judicial Code] only undertook to add certain specified rights and remedies to a saving clause within a code section conferring jurisdiction. We have held that before the amendment and irrespective of that section, such rights and remedies did not apply to maritime torts because they were inconsistent with paramount Federal law—within that field they had no existence. Were the added words therefore wholly ineffective? The usual function of a saving clause is to preserve something from immediate interference—not to create; and the rule is that expression by the legislature of an erroneous opinion concerning the law does not alter it. Endlich, *Interpretation of Statutes*, sec. 372.

Neither branch of Congress devoted much debate to the act under consideration—altogether, less than two pages of the Record (65th Cong., 1st sess., pp. 7605, 7843). The Judiciary Committee of the House made no report; but a brief one by the Senate Judiciary Committee probably indicates the general legislative purpose. And, with this and the accompanying circumstances, the words must be read.

Having regard to all these things, we conclude that Congress undertook to permit application of workmen's compensation laws of the several States to injuries within admiralty and maritime jurisdiction; and to save such statutes from the objections pointed out in *Southern Pacific Co. v. Jensen*. It sought to authorize and sanction action by the States in prescribing and enforcing, as to all parties concerned, rights, obligations, liabilities, and remedies designed to provide compensation for injuries suffered by employees engaged in maritime work.

And so construed, we think the enactment is beyond the power of Congress. Its power to legislate concerning the rights and liabilities within the maritime jurisdiction and remedies for their enforcement, arises from the Constitution, as above indicated. The definite object of the grant was to commit direct control to the Federal Government; to relieve maritime commerce from unnecessary burdens and disadvantages incident to discordant legislation; and to establish, so far as practicable, harmonious and uniform rules applicable throughout every part of the Union.

To say that because Congress could have enacted a compensation act applicable to maritime injuries, it could authorize the States to do so as they might desire, is false reasoning. Moreover, such an authorization would inevitably destroy the harmony and uniformity which the Constitution not only contemplated but actually established—it would defeat the very purpose of the grant.

The Dissenting Opinion.

THE dissenting opinion, as presented by Mr. Justice Holmes, after reciting the references to the amended sections of the Judicial Code, continues in part as follows:

I do not suppose that anyone would say that the words, "The judicial power shall extend * * * to all cases of admiralty and maritime jurisdiction" (Constitution, Art. III, sec. 3), by implication enacted a whole code for master and servant at sea, that could be modified only by a constitutional amendment. But somehow or other the ordinary common-law rules of liability as between master and servant have come to be applied to a considerable extent in admiralty. If my explanation, that the source is the common law of the several States, is not accepted, I can only say I do not know how unless by the fiat of the judges. But surely the power that imposed the obligation can change it, and I suppose Congress can do as much as the judges who introduced the rules. For we know that they were introduced and can not have been elicited by logic alone from the medieval sea laws.

But if Congress can legislate, it has done so. It has adopted statutes that were in force when the act of October 6, 1917, was passed, and to that extent has acted as definitely as if it had repeated the words used by the several States—not an unfamiliar form of law. [Cases cited.] An act of Congress, we always say, will be construed so as to sustain it, if possible, and therefore if it were necessary the words “rights and remedies under the workmen’s compensation laws of any State” should be taken to refer solely to laws existing at the time, as it certainly does at least include them.

Mr. Justice Holmes cited in support of his position, and that of his concurring colleagues, decisions sustaining the validity of State pilotage laws, and also pointed out that in the saving of a common-law remedy, Congress “adopted the common law of the several States within their several jurisdictions, and, I may add by way of anticipation, included at least some subsequent statutory changes,” citing cases.

However desirable it may seem to any student of the problem that there should be a compensation system for maritime workers such as practically all the States having important harbors have enacted, the fact remains that Congress in its attempt to provide this system through its amendment of the Judicial Code enacted a diverse and not a uniform method of adjudication. The laws of New York cover the great harbor of the city of the same name, while the port of Boston is covered by a compensation law differing considerably in its provisions; and the same is true for Philadelphia, Baltimore, Baton Rouge, Galveston, San Francisco, Seattle, etc. Furthermore, three inharmonious modes of recovery apparently existed side by side: In admiralty, at common law, and under the compensation law of the locality where the accident occurred or the contract was entered into. Such diversity makes for uncertainty and conflict, and is at direct variance with “the object of vesting in Congress the power to regulate commerce with foreign nations and among the States,” which “was to insure uniformity of regulation against conflicting and discriminating State legislation” (*County of Mobile v. Kimball* (1880), 102 U.S. 691); or, as said in the Jensen case above cited, “If New York can subject foreign ships coming to her ports to such obligations as those imposed by her compensation statute, other States may do likewise. The necessary consequence would be destruction of the very uniformity in respect to maritime matters which the Constitution was designed to establish.”

It is of interest to note the diversity of construction put upon the amendment to the Judicial Code prior to the decision in the instant case. A Federal judge of the New York district took the view that the amendment had the effect of incorporating into the Judicial Code compensation legislation whether existing or of subsequent enactment; so that in States where other liabilities were abolished in favor of the remedy provided by compensation, this provision was operative in maritime cases since the amendment of the code, and none other could be availed of. (*The Howell*, 257 Fed. 578.) On the other hand, a court of the same rank of the district of Oregon took the ground that since the amendment to the code placed the three remedies on an equality, the Oregon compensation law could not be regarded as exclusive, and that Federal courts must administer maritime law as provided by Congress, unaffected by State legislation. (*Rohde v. Grant Smith Porter Co.*, 259 Fed. 304.) The decision of the Supreme Court of California, March 12, 1920, in a case

not yet reported, goes still further, holding the amendment to the Judicial Code unconstitutional on grounds closely paralleling those announced by the Supreme Court of the United States in its decision two months later. (*Sudden & Christensen v. Industrial Accident Commission*, — Pac. —.)

The decision of the Supreme Court has at least the merit of ending the very apparent uncertainty as to the effect and validity of the Federal amendment under consideration, and points the way to authoritative action by Congress; or, as said by the Seamen's Journal of San Francisco, "In one way the decision is a distinct relief. The maritime workers of the United States now know where they stand in this matter. Let them now get together and clear the decks for action that will lead to the speedy enactment of a Federal workmen's compensation law."

Of course the decision invalidates awards made under the amendment, and terminates all claims under consideration where the injury comes under maritime law.

In California, for instance, the decision has destroyed every hope the widows and children of the men lost in the *Romokc*, *San Gabriel*, *George Loomis*, and *J. A. Chandler* ever had of getting any compensation whatever. It is worse than useless for them to bring suits in a court of admiralty, for the law expressly limits the shipowner's liability for damage resulting from the loss of the ship to the amount salvaged from the wreck, and the above named ships were all total losses.

Even the long-established saving of a common-law remedy found in the code can hardly be looked upon as valuable in view of the decision of the Supreme Court in a case in which the 20th section of the seamen's act of 1915 (38 Stat. 1185) was under consideration. This section undertook to abolish the doctrine of fellow service as between seamen having command and those under their authority. It was held (*Chelentis v. Luckenbach S. S. Co.*, 247 U. S. 372, 38 Sup. Ct. 501) that it was only possible to enforce by common-law remedies any right sanctioned by the maritime law, this being the utmost effect that could be given to the saving in the Judicial Code. "We find nothing therein which reveals an intention to give the complaining party an election to determine whether the defendant's liability shall be measured by common-law standards rather than those by the maritime law." The section of the seamen's act under consideration was said to "disclose no intention to impose upon shipowners the same measure of liability for injuries suffered by the crew while at sea as the common law prescribes for employers in respect of their employees on shore." This decision so completely invalidates the anticipated effect of section 20 of the seamen's act that an amendment thereof has been incorporated in current legislation which proposes an election on the part of a seaman suffering personal injury by which he may bring suit, with right of trial by jury, in lieu of a maritime proceeding, and have in his action the benefit of "all statutes of the United States modifying or extending the common-law right or remedy in cases of personal injury to railway employees." This has the advantage, of course, of making applicable the provisions of a Federal law, but in the face of the decision in the *Chelentis* case it is not apparent that it has surmounted the difficulties therein interposed to the operation of the original section. Furthermore, it proposes at best to give but a right of action under the limitations of a type of

law that has been largely disappointing to its proponents in its own field, and whose spirit is not in harmony with maritime law.

Those who have studied the workings of the railroad act for interstate commerce in comparison with the results of compensation legislation when applied to similar employment in carrying on intrastate commerce can but regret that the efforts put forth to secure an amendment permitting suits for damages could not have been directed to the securing of a compensation law, which after all more nearly approaches the spirit of the maritime law in its disregard of the matter of negligence as a basis for claims, and has been abundantly approved in the 42 States of the Union in which such laws now exist. The decision in the Knickerbocker case shows the necessity for congressional action in behalf of maritime employees just as emphatically as the decision in the case of the New York Central R. R. Co. v. Winfield (244 U. S. 147, 37 Sup. Ct. 546) demonstrates the necessity of Federal action for interstate carriers by railroad. The reasons for the failure thus far to secure this much-needed legislation for employees in interstate and foreign commerce need not be gone into, but it is evident that every added failure to secure the benefits of improved legislation by piecemeal or compromise action only emphasizes the duty and responsibility of Congress to provide a uniform law, efficiently administered, for the compensation of injured workers and their dependents in these great fields which are beyond the control of the States.

Recent Reports on Operation of Workmen's Compensation Laws.

Illinois.

THE Industrial Commission of Illinois recently published a brief report on its activities for the year ending June 30, 1919, with statistics for the calendar years 1917 and 1918.¹ The report opens with a review of the amendments to the State law enlarging benefits in a number of cases, and making procedure more simple and direct. It is shown that 294 compensation cases were pending or taken up to the court on appeal from the orders of the commission during the year. Of these, 149 were pending at the end of the year. In 92 cases the decision of the industrial commission was affirmed, while in 29 the court disagreed with the commission on some point. In 21 cases the matter was remanded to the commission, in 6 the award was vacated, and in 2 the record of the commission was quashed. Important decisions of the supreme court are also noted, particular emphasis being placed on one in which a one-armed workman lost a leg as a result of an accident in his employment and was held to be entitled to compensation by the last employer for permanent total disability.

The total number of arbitrations filed for the year ending July 1, 1919, was 5,696, which was 52 per cent more than the number for the

¹Industrial Commission, State of Illinois. Annual report for fiscal year ending June 30, 1919, and statistical report for calendar years 1918 and 1917. Springfield, Ill., 1920. 49 pp.

preceding year. There were 2,869 awards made, or just about one-half of the number of arbitrations filed. The total amount awarded was \$2,796,905.

Requests for lump sums numbered 3,014. Lump sums were granted in 2,359 cases, of which 2,051 were for nonfatal injuries, and 308 for fatal injuries; final rejection was made in 193 cases, while all other cases were continued or otherwise disposed of.

The statistical tables are presented, "as far as possible," in accordance with the recommendations of the statistical committee of the International Association of Industrial Accident Boards and Commissions. A new feature of the table of awards is one showing the unpaid amounts on awards for the year. The number of accidents for 1918 (calendar year) was 38,247. Of these, 35,989 were reported as closed cases, and 2,258 as open or pending. The amount of compensation paid for both classes of cases was \$3,399,243, while the amount still to be paid was \$1,747,252. Medical and funeral expenses are reported at \$497,691, though it is said that medical payments undoubtedly greatly exceeded the above amount, as it does not include payments on noncompensable accidents nor medical payments made by contracts.

The largest number of accidents, 8,490, is reported from the mining of coal; next come metal products, with 4,405; foods, beverages, and tobacco, 4,001; and machinery and instruments, 3,107. Out of 38,247 compensable cases, 629 were for death, 10 for permanent total disability, 3,904 for permanent partial disability, and 33,704 for temporary total disability. A table giving the location of injuries shows that there were 2,654 head injuries, of which more than one-half—1,456—affected one eye, while 60 affected both eyes. Injuries to the face and neck numbered 938, to the trunk 5,310, to the upper extremities 17,060, to the thumb 1,717, and to the index finger 2,989. The lower extremities suffered 12,285 injuries.

Other tables show the nature of the injury by cause of accident, nature of injury and result of disability, and distribution by counties, by months, by sex and age, and by industry, dependency, and average cost. The average cost of temporary total disabilities was \$54; of permanent partial disabilities, \$511; of permanent total disabilities, \$11,961; and for death, \$2,703.

Similar tables to those noted above are given for the year 1917, besides a detailed table of fatal accidents showing occupation, age, cause of accident, number of dependents, compensation, medical and hospital expenses, and funeral costs.

Kentucky.

THE third annual report of the compensation board of Kentucky² begins with an account of the maintenance fund, which is derived from a 4 per cent tax on the net premiums received by insurance companies on compensation business done in this State, and a like tax on self insurers. The income for the first year was \$36,236, and expenses amounted to \$26,589. Income during the second year and balance carried over from the first year totaled \$46,053,

² Workmen's Compensation Board, Commonwealth of Kentucky. Annual report of department, June 30, 1918, to June 30, 1919. [Frankfort, 1919.] 82 pp.

of which \$26,025 was expended. The third year showed receipts and balance carried over from preceding year totaling \$106,593 and expenses amounting to \$32,388, leaving a balance of \$74,205 on June 30, 1919. The low cost of administration, which is said to be due to restricting the employment of assistance to that which was absolutely necessary, "consistent with the growth and development of the department," is emphasized.

The number of accidents reported during the year was 13,894, of which the coal-mining industry was responsible for 4,784; 5,850 agreements were approved by the board, covering compensation amounting to \$293,522, besides medical, surgical, and hospital expenses. The satisfactory operation of the act is said to be evidenced by the fact that up to June 30, 1919, 5,674 employers had accepted the provisions of the law, while only 42 had withdrawn their acceptances, and in no case was a complaint filed as a cause of the withdrawal.

The Kentucky statute is unique in legislation in the United States, in that it requires a written election by the employee if he is to come under the act. This is said to be a necessity on account of the provision of the State constitution, which was held by the court of appeals of the State to invalidate the earlier law which presumed election by the employee where the employer had accepted the provisions of the act. An amendment to the constitution is recommended, so as to avoid the necessity of this provision, inasmuch as it is thought to militate against the satisfactory operation of the law, employees being debarred from rights under it by any failure to take the necessary step, even though they may have intended to do so.

The tables show the number of accidents by industries, by cause of injury, by nature of injury, the amount of awards, the number of closed cases, and by duration of disability in days. There is some lack of coordination and classification of the material, so that the data can not be made use of as readily as might be desired. The report closes with a discussion of procedure, and a reproduction of the rules used and an explanation of the forms adopted by the board.

Oklahoma.³

THE compensation law of this State and rules of procedure of the commission are presented in the first 60 pages, following which are opinions of the industrial commission, and of the supreme court in cases appealed from the commission. This is the second volume of the series, and presents 58 decisions by the commission and 7 by the supreme court. The volume is published in accordance with an order by the commission, which directs that persons transacting business before the commission and desiring to refer to its decisions or orders, "shall refer to same by citing the official reports by style of case and page and volume number of said reports." Following the opinions reproduced is a digest presenting, under various topical headings, brief statements of findings, with citations to cases. Indexes to the law and the rules conclude the report.

³ Industrial Commission. Reports, vol. 2. Cases determined by the commission from Jan. 1, 1918, to Jan. 1, 1920. Oklahoma City, 1920. 327 pp.

Oregon.⁴

THE report of the Industrial Accident Commission of Oregon is practically entirely statistical, and differs from the usual report in that it presents data in cumulative form covering three years' operation of the law. The act came into effect July 1, 1914, but the first year's experience is omitted from the cumulative tables, so that but three years' experience is shown. The reason for cumulative rather than separate tables "is that the larger volume of experience and the longer period covered tend to smooth out the irregularities of the separate years, thus making the results more reliable."

Certain facts are given, however, for the fiscal year covering July 1, 1917, to June 30, 1918. The entire business of compensation is transacted through a State fund to which employers contribute at classified rates, while 1 cent for each day worked is to be contributed by the employee. For the year named the employers contributed \$1,769,368, and workmen \$156,152. The total receipts were \$2,181,431 and disbursements for benefits \$1,349,510, while administrative expenses amounted to \$106,428. The balance on hand June 30, 1918, was \$1,026,785.

Receipts for the three-year period averaged for all industries \$3.33 per year per \$100 of pay roll; disbursements equaled \$2.51 per \$100 of pay roll. "The three-year experience shows that of the total expenditures by the commission the injured workmen or their dependents received in compensation benefits an average of \$0.9298 of every dollar of such expenditures, and that but \$0.0702 was required to carry the benefits to claimants." Figured on the basis of 300 actual working days representing a full-time worker the summary for the three years shows that 121,272.94 full-time workers suffered 25,119 accidents, losing a total of 2,773,670 days, or 22.871 days per full-time worker. The number of accidents per full-time worker was 0.207.

Fatal cases receiving awards through the three years were 225 in number, or nine-tenths of 1 per cent of all cases; they were responsible, however, for 44.85 per cent of the total awards. Permanent total disability cases numbered 17, or 0.07 per cent of the total, and received 5.21 per cent of the awards. Permanent partial disability resulted in 1,196 cases, or 4.76 per cent of the total, incurring 22.26 per cent of the awards. There were 23,681 cases of temporary total disability, or 94.27 per cent of the total, and costing 27.68 per cent of the aggregated awards. The number of awards for the three years was 25,119 and the aggregate awards, \$2,381,237.

A valuable detailed table shows by industries and groups of industries, receipts and disbursements for the funds, showing separately the gross pay roll for 36 months on which premiums were based, premiums received, workmen's payment, other sources of income, claim awards, and administrative expenses. The total receipts and disbursements per \$100 of gross pay roll, and disbursements per working day, are also shown. The gross pay rolls for 36 months amounted to \$118,610,478. There were employers' premiums of \$3,103,561, and workmen's contributions of \$332,375, the total

⁴ Third report of the State Industrial Accident Commission, showing the cumulative experience for the three-year period ending June 30, 1918. Salem, 1920. 81 pp.

receipts aggregating \$3,947,386. Total disbursements amounted to \$2,977,651, or \$0.082 per working day.

The second table shows frequency of accidents by industries and extent of disability; and the third, severity of injuries by industries and extent of disability. In computing severity the commission makes use of the weightings adopted by the committee on statistics and compensation insurance cost of the International Association of Industrial Accident Boards and Commissions. The fourth table presents compensation and medical aid by extent of disability.

The following table summarizes the experience for the year ending June 30, 1918, and the three years' experience:

COMPENSATION PAID, AND MEDICAL COSTS, BY NATURE OF DISABILITY, FOR THE YEAR AND FOR THREE YEARS ENDING JUNE 30, 1918.

Nature of disability.	Year ending June 30, 1918.				Three years ending June 30, 1918.			
	Compensation.		Medical aid.		Compensation.		Medical aid.	
	Num- ber of cases.	Average amount.	Num- ber of cases.	Average cost.	Num- ber of cases.	Average amount.	Num- ber of cases.	Average cost.
Deaths.....	103	\$5,122.90	57	\$47.49	225	\$4,746.61	(1)	\$30.60
Permanent total disabilities.....	9	7,072.22	6	204.15	17	7,302.80	(1)	205.43
Permanent partial disabilities.....	605	303.99	306	54.80	1,196	443.19	(1)	58.68
Temporary total disabilities.....	12,024	27.73	6,686	13.80	23,651	27.83	(1)	13.61
	12,741	91.81	7,052	15.54	25,119	94.80	13,582	16.11

¹ The number of cases in which medical aid was furnished is not given separately. The costs here shown are based on an aggregate of 13,582 cases. In the remaining cases, medical aid was given under contract, and the cost per case could not be determined.

Other tables show causes of accidents by extent of disability; nature of injury by cause; nature and location of injury, by extent of disability; infected injuries; sex and wages; and sex and age. The concluding table shows remarriage experience of widows to whom compensation awards have been made for the full four-year period of the operation of the act up to June 30, 1918. The table shows widow's age at death of husband, grouped by five-year periods, the average age of children, their number, and the number of widows remarrying in each of the four years. The total number of widows was 159, of whom but 17 have remarried. Seven remarriages occurred in the first year, 6 in the second, 3 in the third, and 1 in the fourth; one widow died in the first year without remarriage. The aggregate years of widowhood amounted to 239. The year in which widowhood occurred is not indicated, but the diminishing number of marriages from the first to the fourth year indicates, so far as any opinion can be formed from such a slight basis, that the tendency to remain single and draw the compensation benefits has increased rather than diminished.

Washington.⁵

THE Industrial Insurance and Medical Aid Departments of Washington combined in the publication of their report for the year ending September 30, 1919. The report opens with an ac-

⁵ Eighth annual report of the Industrial Insurance and Medical Aid Departments for the 12 months ending Sept. 30, 1919. Olympia, 1920. 95 pp.

knowledge of the benefits derived from enlarged appropriations, making it possible to raise the efficiency of the department. It is noted later, however, that the natural growth of the industries of the State was greater than was anticipated when the appropriation was made, so that even with undesirable economies, a deficit is likely to develop. Recommended amendments were adopted by the legislature of 1919, so that a number of new industries have been brought under the act, and other desirable changes have been made. However, these changes result in such modifications of the reports as to render the report for the current year not comparable with the earlier reports in a number of respects. The desirability of uniformity is dwelt upon at some length, and is "regarded as an important objective." A prime existing difficulty is the variation in waiting time. "A State that has a seven-day waiting period has no record of approximately 25 per cent of industrial accidents. Where the waiting period is two weeks, the State will have no record of about 50 per cent of industrial accidents." The original law of Washington had no waiting period, but in 1917 a seven-day waiting period was established. This change "had the immediate effect of reducing the relative number of accidents reported from time to time, because in most instances where the loss of time was less than seven days, there being no compensation involved, neither employer nor employee could be induced to render any report." It was estimated that with a uniform waiting period about 90 per cent of the statistical matter could be made uniform in the different State reports.

Washington is one of the States having a compulsory compensation system and an exclusive State fund. The accident fund is divided into 38 classes, for each of which balances are separately maintained. At the beginning of the year covered the total balance for all funds was \$876,626, while at the end of the year it was \$1,072,742. The aggregate for reserve funds for all classes likewise increased from \$2,616,649 to \$3,606,735. The medical aid fund showed a balance on hand at the end of the year of \$160,902.

The average cost of insurance for each class per \$100 of pay roll is shown for the years 1913 to 1918, inclusive. This ranges from 11 cents in lithographing, printing, etc., 16 cents in moving pictures, theaters, etc., and 30 cents in those industries which are permitted to come under the act by elective adoption, to \$4.44 in the construction of canals, pile driving, the building of breakwaters, etc., and \$4.05 for work on bridges and trestles, millwrighting, tanks and towers. The rate for shipbuilding has averaged \$1.23 per \$100 of pay roll; for logging, sawmills, etc., \$1.92; for coal mines, \$3; for smelters, etc., \$1.37; and for tunnels, sewers, drilling wells, etc., \$2.75. "This is industrial insurance at actual cost. Every dollar paid in by the employers of the State goes direct to their injured employees." The report presents comparisons drawn by statisticians who have examined the laws of States having competitive State funds, setting forth the savings that would result if the rates and system in force in Washington had been in effect in these States.

The number of accidents reported for the year was 22,273, a decrease of 18.4 per cent as compared with the previous year. Of these, 368 were fatal and 30 were adjudged to be permanent total

disabilities. Adjudications made during the year allowed awards in 11,803 cases of temporary disability, 418 cases of death, and 29 cases of permanent total disability. There were also 2,366 awards for permanent partial disability. The average duration in work days of temporary total disability is given as 35.9, and the average cost as \$50.02. Permanent partial disabilities received an average award of \$374.79. It is of interest to note the closeness of this average to that for the year 1916, when there is added to the earlier average the 30 per cent increase due to the increased benefits allowed by amendment to the law. Thus in 1916 the average for permanent partial disabilities was \$289, which, increased by 30 per cent would be \$375.70, or within a dollar of the experience of 1919. Of the 418 claims for death, 171 had been suspended or rejected by the end of the year. The 247 cases pensioned had been awarded an average rate of \$25.44 per month; the average amount of reserves for pensions was \$3,670.37. For permanent total disability the average monthly pension was \$27.17 and the average reserves \$4,062.23.

Other tables show the number of dependents; nativity; conjugal condition; causes of injury, mechanically produced and nonmechanical, by industry; classes; duration of disability; severity ratings, and the specific injuries resulting under different classifications as amputations, fractures, dislocations, etc.

Wyoming.⁶

THE Workmen's Compensation Department of Wyoming issued for the year ending December 31, 1919, a report entitled "Employers' Number." While this report gives in detail the operations of the compensation law of the State for the calendar year 1919, it also summarizes its operations for the 57 months since the act came into operation on April 1, 1915. The first report covered 18 months, the second 15 months, while the third and fourth relate to calendar years. These variations of periods render comparisons possible only for 1918 and 1919.

The report is designated the "Employers' Number" because it is addressed particularly to employers with an effort to promulgate a clearer understanding of what is termed "The Compensation Principle." The law is a compulsory one, and the report attempts so to present the facts as to emphasize the service that is rendered rather than to make prominent the compulsory tax feature of the law. The cooperative benefits are therefore emphasized as well as the moderate costs.

Insurance under the law may be effected only in the State fund, and is required of all employers engaged in extra hazardous employments enumerated in the act. During the first 18 months 241 employers were contributors, while during the second period (15 months) there were 501. During 1918, 664 employers became contributors, while in 1919 the number increased to 1,032. Employers' assessments in 1918 amounted to \$215,498, and in 1919 to \$240,308.

The State appropriated \$40,000 for each of these years, while interest on deposits and investments amounted in 1919 to almost

⁶ Fourth report of the Workmen's Compensation Department for the 12 months ending Dec. 31, 1919. Laramie, Wyo., 1920. 165 pp.

as much—\$32,803. Disbursements for injuries in 1918 amounted to \$94,954, and in 1919 to \$131,758. Expenses in 1918 were just under 3.9 per cent of the employers' assessments, while in 1919 they slightly exceeded 3.8 per cent. The total receipts for the State fund during the period of its existence amounted to \$1,167,498, while the total disbursements were \$418,835, leaving a balance of \$748,663.

Awards made during 1919, amounting to \$144,252, were distributed in the following proportions: For death, 45.2 per cent; for permanent total disability, 6.6; for permanent partial disability, 29.8; and for temporary disability, 18.4. Taking the whole experience of the nearly five years' operation of the law, there were 123 awards for death amounting to \$167,217; 11 for permanent total disability, amounting to \$15,158; 292 for permanent partial disability, amounting to \$131,684; and 2,187 for temporary disability, amounting to \$79,626. The total aggregates 2,613 claims paid, amounting to \$393,685. There were 23 supplemental and follow-up orders aggregating \$10,426, in addition to the foregoing.

The tables show the number and cause of accidents by nature of industry, receipts and disbursements by industries, and a statement of the individual contributions of employers during the year.

Manitoba.⁷

THE Workmen's Compensation Board of Manitoba presents in its annual report summary figures for 1919, and details for 1917-1918. An amendment of 1919 permits employers not covered by the act voluntarily to place their employees under it, and a growing tendency is noted to make use of this opportunity. The effect of the increased cost of living on the allowances provided for widows and children leads to a recommendation that monthly payments in each case be increased 50 per cent, for widows from \$20 to \$30, and for children from \$5 to \$7.50.

The number of accidents reported during 1919 was 2,829, an increase of about 5 per cent over the number reported in 1918. There were 1,684 claims filed, 985 cases in which there were no claims or the claims were not accepted, and 160 cases in which the files were incomplete at the time of the report. Of the claims filed 33 were for death, 70 for permanent disability, either partial or total, and 1,581 for temporary disability.

Comparisons with 1918 show a considerable increase in the amount of business transacted, and a canvass is being made by the board to secure compliance with the law on the part of all classified employers. Some flagrant violations and evasions of the act were found, in all 19 employers being prosecuted, with conviction obtained and a fine imposed in every case. A notable case was that of the Canadian National Railway, which had refused to make its contributions to the administrative fund for two years, but which has finally complied with the act and is now making its contribution as contemplated by law. The administrative expense is borne by a contribution of $7\frac{1}{2}$ per cent of the premiums paid insurance carriers, and at the same rate on an estimated premium chargeable self insurers.

⁷ Report for 1919 of the Workmen's Compensation Board, Manitoba. Winnipeg, 1920. 32 pp.

The actual expenses of administration were 6.3 per cent of the estimated premium income for 1919, while in 1918 the rate was 5.69.

The number of accidents occurring in 1918 for which report is made was 1,731. Of these 1,587 were temporary in their results, causing disability for an average of 23.25 days. There were 102 cases of permanent disability, of which but two caused an impairment of the earning capacity amounting to 70 per cent or more. There were 42 deaths, involving 61 total dependents and 4 partial dependents.

The amounts awarded were not given for the different classes of injuries, but the tables show time lost, average age and wage, causes of accidents, month of occurrence, duration of temporary disabilities, nature of injuries, and industries in which permanent disability and death cases occurred.

LABOR LAWS AND DECISIONS.

Retirement of Civil-Service Employees.

THERE was enacted into law on May 22, 1920, a retirement bill for employees in the classified civil service of the United States, this date being the day of its approval by the President. The bill known as the Lehlbach-Sterling bill, from the chairmen of the committees of the House and Senate, respectively, having the matter in charge, passed the Senate April 3, 1920, and passed the House with amendments on the 30th of the same month. The measure then went to conference, where an agreement was reached which received the indorsement of both Houses. This completed the legislative processes in connection with a measure which terminates efforts extending over 30 years. Indeed, civil-service retirement bills were introduced in both Houses of Congress as early as 1887.¹ In 1890 Postmaster General Wanamaker introduced in his annual report a recommendation for a method of retiring superannuated Government employees, with particular reference, of course, to the Postal Service. Repeated recommendations have been made by practically all the Cabinet officers, by the Civil Service Commission, and by others interested, looking toward the same end, and it is estimated that at least 50 bills have been introduced in Congress for its accomplishment.

A prime hindrance to the enactment of any law was the decided divergence of opinion as to how the costs should be met. Some favored retirement at the entire cost of the Government, while others took the view that contributions made by the employees should constitute the sole source of retirement benefits. The idea of joint contributions was finally adopted as a solution of the problem. There were of course some in both Houses who regarded the entire plan as objectionable, but the great majority took the view that it was both economical for the Government and humane to its employees to provide a system of retirement for superannuated workers.

As originally drawn, the bill contemplated retirement for civil-service employees generally at the age of 65 years—mechanics, city and rural letter carriers and post-office clerks being eligible for retirement at the age of 62 years, and railway postal clerks at 60

¹ The so-called Pendleton act, establishing the classified civil service, was enacted in January, 1883. In January, 1887, Senator Hampton of South Carolina and Mr. Crain of Texas, introduced bills in the Senate and House, respectively, "To establish a retired list for persons employed in the Civil Service." A year later Mr. Crain reintroduced his bill in the 50th Congress. No further action in this line was taken until in the 54th Congress bills were introduced by Senator Proctor of Vermont, Mr. Wilson of Ohio, and Mr. Powers of Vermont in December, 1895; by Mr. Tawney of Minnesota in 1896; and by Mr. Brosius of Pennsylvania, Mr. Gillett of Massachusetts, and Mr. Hurley of New York in 1897. Senator Lodge of Massachusetts and Messrs. Hurley, Brosius, Gillett, and Tawney introduced bills in the 55th Congress; and Messrs. Brosius and Boutell (Illinois) in the 56th. Beginning with the 54th Congress, therefore, the effort to secure a retirement system has been practically continuous, though no committee action was taken on any of the bills noted above except an adverse report on Mr. Crain's second bill.

years of age. These recommendations were made by the committees of both Houses, but when the bill was taken up in the Senate there was strong opposition to these age limits, and a uniform retirement age of 70 years was substituted for the various ages named in the bill. When it reached the House the original age limits were restored, but in conference a compromise was made by leaving the age 70 years for the general classes of employees, while for mechanics, letter carriers, and post-office clerks the age was made 65 years, and for railway postal clerks 62 years, and these provisions stand as the terms of the law, there being no opposition in the House, though in the Senate there was some effort to secure an insistence on a uniform 70-year basis. However, the report was considered on May 17 by unanimous consent and adopted without a record vote.

Conditions of retirement are fixed by length of service, no retirement for age being authorized until after 15 years of service, which secures the minimum benefit of 30 per cent of the employee's average annual salary or pay for the 10 years next preceding the date of retirement. The annuity for this class may not exceed \$360 per annum nor be less than \$180. After service of 18 years but less than 21 the percentage is 36, and the annuity ranges from \$216 to \$432. The next grade includes employees whose service ranges from 21 to 24 years. These receive 42 per cent of their basic salary or pay, not less than \$252 nor more than \$504 per annum. Those serving from 24 to 27 years before reaching the age of retirement receive 48 per cent of their pay as an annuity, not less than \$288 nor more than \$576. From 27 to 30 years the percentage is 54, and a sum not less than \$324 nor more than \$648. The maximum is 60 per cent of the annual pay for employees having served 30 years or more, the amounts ranging from \$360 to \$720 per annum.

Employees not wishing to retire on reaching the age fixed by the law may apply for an extension of two years, and if the head of the office in which the applicant is employed certifies to his efficiency and willingness to remain in the service, and that such continuance would be advantageous to the public service, the employee may be retained for a term not to exceed two years on approval and certification by the Civil Service Commission. A similar extension may be had for an additional term, and so on, but at the end of 10 years from the date of the act but two such extensions will be permitted.

Employees "totally disabled for useful and efficient service by reason of disease or injury not due to vicious habits, intemperance, or willful misconduct on the part of the employee" may be retired on the same basis, in so far as periods of service and amounts of benefits are concerned, as are persons reaching the age of 70 years. Annual examinations are provided for to determine the continuing disability of the annuitant.

Persons covered include all employees in the classified civil service of the United States, including superintendents of national cemeteries, employees of the Superintendent of the United States Capitol Buildings and Grounds, the Library of Congress, and the Botanic Gardens. Excepted are persons appointed by the President and confirmed by the Senate, postmasters, and such employees of the Light-house Service as come within the provisions of a special retirement act for that service. It also includes all regular annual employees of the

municipal government of the District of Columbia, including those receiving per diem compensation but rendering continuous service. Members of the police and fire departments are excluded, as are school officers and teachers, other retirement systems being provided for them; other public school employees are included, however.

The contributions to be made by employees begin on "the first day of the third month next following the passage of this act," and are made monthly thereafter, the amount being 2½ per cent of the basic salary or pay, therefore not affecting any bonus that may be received. Provision is made for the conservation and investment of these deductions in a special fund to be known as the civil service retirement and disability fund. Such deductions are to be credited to the individual employee, and in case of his absolute separation from the service before becoming eligible for retirement on an annuity, all deductions shall be returned with accrued interest compounded at the rate of 4 per cent per annum. It is also provided that if an annuitant shall die before receiving annuities equal in amount to the total deductions from his or her salary, together with interest thereon at 4 per cent compounded annually, any excess remaining shall be paid over in one sum to the legal representatives of the deceased annuitant; or if the employee shall die before retirement, the amount deducted shall be paid with interest to said representatives.

The act is to be administered by the Commissioner of Pensions, although the Civil Service Commission is to maintain a complete record of transfers, appointments, changes in grade, separation from service, etc., so as to furnish the Commissioner of Pensions with an adequate basis for the handling of the system.

The date for the coming into effect of the act, so far as deductions from salaries are concerned, is reported by the Pension Bureau to be August 1, the first salary payment to be affected being that due on August 15, following which deductions will be made on each pay day, thus keeping all accounts current and equalizing the burden of the deductions, unless the Comptroller of the Treasury shall decide that deductions may be made at the end of each two-week period instead of at the end of the month only. The retirement of persons eligible by reason of attained age will take place August 21, in the absence of action for an extension of service, the employment status terminating August 20.



Federal Provision for Vocational Rehabilitation of Disabled Persons.

A SUMMARY account of legislation looking to the rehabilitation of persons disqualified for employment chiefly by reason of industrial injuries is carried in the MONTHLY LABOR REVIEW for April, 1920 (pp. 202-206).¹ Some of these laws provide for co-operation with the Federal Government in the undertaking, as was pointed out in the article noted.

On June 21, 1919, the Senate passed a bill providing for cooper-

¹ States which have enacted rehabilitation laws are Massachusetts, in 1918, and the following in 1919: California, Illinois, Minnesota, Nevada, New Jersey, North Dakota, Oregon, Pennsylvania, and Rhode Island. Full information is not at hand as to the current year, but laws have been enacted in New York and Virginia this year.

ation with the States in the vocational rehabilitation "of persons disabled," meaning thereby "any person, who by reason of a physical defect or infirmity, whether congenital or acquired by accident, injury, or disease, is, or may be expected to be, totally or partially incapacitated for remunerative occupations." Instead of acting on this measure the House passed quite a similar one on October 17, 1919, which it transmitted to the Senate for its consideration. On April 12, 1920, the Senate acted by substituting its measure for that sent over from the House, and a conference was requested. No conference was ever held, but the Senate's measure was referred to the Committee on Education. On May 25, 1920, the House took up the Senate measure under a special rule and agreed to its acceptance on a motion to concur in the Senate amendment. The bill was approved by the President on June 2.

It is apparent from the scope of the act that it is much wider than if restricted to persons disabled by injuries received in industry, and the inclusion of persons suffering from congenital disability or disease met with some opposition. The term "rehabilitation" is defined as meaning "the rendering of a person disabled fit to engage in a remunerative occupation." The act appropriates \$750,000 for the fiscal year ending June 30, 1921; and "for the fiscal year ending June 30, 1922, and thereafter for a period of two years, the sum of \$1,000,000 annually." This amount is to be divided among the States prorated according to their population, not less than \$5,000 per year to be allotted to any State. States are to furnish dollar for dollar for any Federal aid accepted, and plans of administration, courses and methods of instruction, qualifications of teachers, directors, etc., and methods of placement are to be approved by the Federal Board of Vocational Education. The act is in effect a supplement to the Smith-Hughes Vocational Act of 1917, and contemplates administration in the various States by the same boards that are provided for to co-operate under the Smith-Hughes Act. The Federal board is allowed a special appropriation of \$75,000 annually for the four-year period contemplated for the operation of the act under its initial enactment, for the purpose of making studies as to the rehabilitation of disabled persons and their placement in suitable or gainful positions and for administrative costs.

Constitutionality of the Seamen's Act Upheld.

THE United States Supreme Court recently handed down an important decision interpreting section 4 of the Seamen's Act of March 4, 1915 (38 Stat., 1164), which relates to the payment of the wages of seamen. The section provides that every seaman on board a vessel is entitled to demand and have paid to him by the master of the vessel at every port where the vessel loads or discharges cargo, one-half of the wages which he has then earned, anything in the contract of employment to the contrary being declared void. It is also provided that in the event of the refusal of the master to pay one-half the wages due, the seaman then becomes entitled to full payment of his wages and can resort to the United States courts to enforce his rights under the act. The act specifically includes foreign seamen on board foreign vessels while in harbors of the United States.

In this case (*Strathearn S. S. Co. v. Dillon*, 40 Sup. Ct., 350) Dillon, a British subject, shipped on board a British vessel in Liverpool, England, under shipping articles which stated that the voyage was to end at Liverpool in not more than three years and that no wages were to be paid until the end of the voyage. This agreement was made in May, 1916. When the vessel arrived at Pensacola, Fla., in July, 1916, Dillon, in accordance with the above provision of the United States seamen's act, made a demand for one-half of his wages which he had then earned. The master of the vessel refused this demand, whereupon Dillon filed in the district court of the United States a libel against the ship for the entire amount due him.

The district court found against Plaintiff Dillon, upon the ground that his demand, because made within five days after the arrival of the vessel in an American port, was premature. Dillon appealed to the circuit court of appeals which reversed this decision and held that he was entitled to a recovery (256 Fed., 631, 168 C. C. A., 25). This decree was brought before the United States Supreme Court by the *Strathearn Steamship Co.* on a writ of error. The Supreme Court affirmed the decision in favor of Dillon.

The contentions of the steamship company were (1) that the act applied to American seamen only and therefore could not be invoked by a British subject, and (2) that the act is unconstitutional in that it is destructive of contractual rights.

Both these points were resolved against the company. In deciding the first point the court said in part:

But, taking the provisions of the act as the same are written, we think it plain that it manifests the purpose of Congress to place American and foreign seamen on an equality of right in so far as the privileges of this section are concerned, with equal opportunity to resort to the courts of the United States for the enforcement of the act.

In deciding in favor of the constitutionality of the act, the court continued as follows:

We come then to consider the contention that this construction renders the statute unconstitutional as being destructive of contract rights. But we think this contention must be decided adversely to the petitioner upon the authority of previous cases in this court. The matter was fully considered in *Patterson v. Bark Eudora* (190 U. S., 169, 23 Sup. Ct., 821, 47 L. Ed., 1002), in which the previous decisions of this court were reviewed, and the conclusion reached that the jurisdiction of this Government over foreign merchant vessels in our ports was such as to give authority to Congress to make provisions of the character now under consideration; that it was for this Government to determine upon what terms and conditions vessels of other countries might be permitted to enter our harbors, and to impose conditions upon the shipment of sailors in our own ports, and make them applicable to foreign as well as domestic vessels. Upon the authority of that case, and others cited in the opinion therein, we have no doubt as to the authority of Congress to pass a statute of this sort, applicable to foreign vessels in our ports and controlling the employment and payment of seamen as a condition of the right of such foreign vessels to enter and use the ports of the United States.

Although, as above stated, the constitutionality of the seamen's act had been previously sustained, the particular point here involved had never before been decided and for this reason the case was looked upon by the seamen's unions as a test case. The best legal talent obtainable was engaged by the organized seamen of America, and the result, it was said, "was as anticipated—a unanimous verdict for the constitutionality of the seamen's charter of freedom." It has long been the contention of American seamen that the United States by setting a high standard for the employment and protection of its

seamen would eventually compel other countries to bring their standards up to the same level. The above decision has for this reason been hailed by the organized seamen as a distinct triumph, and an advance toward this end. The importance attached to this case is indicated by the fact that in addition to the counsel for the parties, representatives of the British embassy and the United States were permitted to appear by special leave.

Austrian Law Establishing Chambers of Labor.

FOR decades Austrian wage earners have repeatedly (the first time in 1848) demanded that a legal institution be created for the representation of their interests. This demand has finally been realized through the recent enactment by the National Assembly of a law establishing chambers of labor (*Arbeiterkammern*).¹ The basic idea of the demand of the wage earners and also of the law is that, as corporations representing the interests of other classes of the population, such as chambers of commerce and industry (*Handels- und Gewerbekammern*), bar associations (*Advokatenkammern*), medical associations (*Aerztekammern*), etc., have been in existence for a long time, like corporations should also be created for the safeguarding of the interests of manual workers and salaried employees. Consistent with this idea the wage earners have always opposed the creation of so-called joint industrial councils (*Arbeitskammern*), in which both employers and employed were to be equally represented, and have insisted on the creation of chambers of labor in which the wage earners alone should be represented. Briefly summarized the provisions of the new law are the following:

The law states that it shall be the task of the chambers of labor to represent the economic interests and to promote the economic and social conditions of manual workers and salaried employees in industry, commerce, transportation, and mining. The duties assigned to the chambers are:

1. To render opinions and submit proposals to the authorities and legislative bodies as to the regulation of working conditions, protective labor legislation, workmen's insurance, the labor market, and on all matters of trade, industry, commerce, and transportation which directly or indirectly affect the interests of manual workers or salaried employees, and finally as to matters relating to housing, nutrition, hygiene, and education of the people.

2. To render opinions on bills, laws, and other legal regulations, dealing with matters enumerated under 1.

3. To render opinions as to the creation and organization of public institutions for the promotion of trades, industry, commerce, and transportation.

4. To cooperate in the industrial and economic administration and in measures and institutions relating to labor relations or the improvement of the economic and social situation of manual workers

¹ Die Gewerkschaft, vol. 12, No. 10. Vienna, Mar. 9, 1920.

and salaried employees, whenever special laws and regulations provide such cooperation.

5. To send representatives into other corporations and authorities or make proposals for appointments to such corporations or authorities whenever such action is provided by special laws or regulations.

6. To keep lists of occupational organizations of manual workers and salaried employees in existence within the district of the chamber.

7. To cooperate in the compilation of labor statistics and in investigations of social and economic conditions of manual workers and salaried employees.

8. To create and administer or to cooperate in the creation and administration of institutions for the improvement of the economic and social situation of manual workers and salaried employees, especially for the purpose of concluding collective agreements, the procuring of employment, the combating of unemployment, housing work, care for the nutrition and health of manual workers and salaried employees and of their families, promotion of vocational, general mental and physical training of manual workers and salaried employees, and of the growing generation.

The law orders all national Government offices, State governments, and councils to submit to the chambers of labor bills as well as regulations for the enforcement of laws affecting the interests of manual and nonmanual workers. It places the chambers of labor within the organization and under the supervision of the ministry for social administration.

Each chamber of labor is to be composed of two sections—a section for manual workers and one for salaried employees. A chamber may be composed of not less than 30 and not more than 100 members. The election of members is to be effected according to the principles of proportionate representation, by direct secret ballot, and for a term of 5 years. Each section forms a separate electorate.

Every manual worker or salaried employee, without distinction of citizenship, who on election day has completed his eighteenth year of age and has been employed at least two months within the district of the chamber of labor has the right to vote. All citizens of German Austria who on election day have completed their twenty-fourth year of age and have been employed as manual workers or salaried employees for at least 3 years are also eligible.

The newly elected chamber of labor is to be convened by the supervisory authority. At its initial session it shall elect from among its midst a president, whose election must be confirmed by the minister for social administration. The president is the legal representative of the chamber. The sessions of the chamber shall as a rule be public.

The costs of the chambers of labor are to be borne by the manual workers and salaried employees themselves. Contributions for the chambers of labor shall as a rule be collected by means of assessments upon the contributions for sick funds. The amount of these assessments is to be determined by the chambers of labor.

A chamber of labor is to be created in every locality in which a chamber of commerce and industry exists, i. e., in the cities of Vienna, Linz, Gratz, Leoben, Klagenfurt, Innsbruck, and Feldkirch.

At least once a year the directorates of all the chambers of labor are to meet in conference for the purpose of discussing matters of common interest. The chambers of labor are authorized to convene manual workers' and salaried employees' conferences to be attended by representatives of manual workers' and salaried employees' organizations and by the members of the manual workers' and salaried employees' sections of the chambers. These conferences are intended to bring about closer relations between the chambers of labor and the trade-unions.

Austrian Domestic Service Law.

DIE Gewerkschaft (Vienna), the official organ of the Austrian trade-unions for March 2, 1920, reports that after long discussions the Austrian National Assembly has passed a protective law for domestic servants. The enactment of the bill was greatly retarded by the contention of the bourgeois parties that the subject dealt with came within the competence of the provincial diets and not within that of the State. The real reason why these circles opposed the bill was that they disliked its basic idea of granting to domestic servants the same legal protection as that already enjoyed by industrial and agricultural workers. The regulation of the hours of labor of domestic servants aroused their strongest opposition.

Consequent to this opposition the bill underwent numerous amendments which weakened it considerably. The terms of the law as finally enacted are the following:

The law is applicable only to persons employed exclusively in domestic service and not to those simultaneously active in an agricultural establishment of their employer. Immediately on entering employment each domestic servant must, on his request, be issued a labor contract showing his rights and duties.

The wages of domestic servants are to be fixed according to local usage. Wages must be paid not later than on the first of each month. Servants not receiving board must be paid the board allowance agreed upon, semimonthly and in advance. If they are furnished board, it must be wholesome and sufficient and as a rule be the same as that furnished to adult healthy members of the family. Servants' quarters must be so constituted that they do not endanger their health and morals. Their sleeping rooms must have doors that can be locked from the inside, and they are to be furnished a safe, lockable receptacle for their personal belongings.

The law provides a daily uninterrupted rest of at least 9 hours, which, as a rule, shall fall within the period between 9 p. m. and 6 a. m. In addition, servants must be allowed a total of two hours' rest for the partaking of the principal meals. Servants under 16 years of age are to be allowed an uninterrupted daily rest of 11 hours and 3 hours' rest during their working time. Any curtailing of rest periods caused by work not permitting of delay must be compensated extra.

Domestic servants must be granted 8 hours' leave every second Sunday, this leave to begin not later than 3 p. m. If leave is to exceed 8 hours it must be previously agreed upon with the employer. In addition, they are to be given 4 hours' leave on one week day of each week, the leave to begin not later than 5 p. m. They must moreover be granted time for attending religious services. During the first year of his service each servant is entitled to one week of annual leave, during the second year to two weeks, and during the fifth year to three weeks. During his annual leave he is to receive full pay and in addition a subsidy in the following amount: In case of one week's leave, half a month's pay; in case of two weeks' leave, one month's pay; and in case of three weeks' leave, one and one-half month's pay. If a domestic servant is discharged by an employer with the obvious intent of depriving the servant of his leave, the latter may claim compensation in the amount of the allowance that would have been due him had he been granted leave.

In case of sickness a domestic servant is entitled to free medical treatment and medicines. If taken to a hospital he is, in addition, entitled to full pay. If the employer moves to another locality, the servant is under no obligation to follow him and can not be discharged for refusing to do so, and, as long as the service contract is not terminated, the servant may in addition to his pay also claim suitable compensation for the failure of the employer to furnish him board.

The term for giving notice is as a rule fixed at two weeks. This term may not be reduced to less than one week by agreement and must be of equal length for both parties. If unequal terms have been agreed upon, the longer term shall be valid. After having received notice of his discharge the servant is entitled to four hours' leave on two week days in order that he may have opportunity to find another place of employment. If a servant leaves his employment without valid reason before the expiration of his service contract the employer may either demand his return into his service or claim damages for breach of contract. If, on the other hand, an employer discharges a servant without valid reason, the latter, without prejudice to his claim for damages, has the right to demand full pay for the period up to the expiration of his service contract; he is moreover entitled to compensation for any amount he could have saved during that time or earned through other service. An entirely new feature of the present law is the provision which stipulates that after 10 years' continuous service with the same employer the servant is on discharge entitled to receipt of a bonus in the amount of three months' pay. This bonus increases by 5 per cent for each additional year of continuous service up to a maximum amount equivalent to one year's pay. If the service relation is, however, terminated through fault of the servant the latter loses his claim to a service bonus.

Whenever a servant leaves his service the employer is obligated to issue him a certificate which shall merely state the duration and nature of the service. Each servant must be provided with a service card issued to him by the proper communal authority.

The law contains special provisions for servants rendering services of a higher order, such as governesses, tutors, etc. They shall be furnished a separate room, whenever possible, and be granted a rest

period of three hours per day. After one year's service they are entitled to two weeks' leave and after two year's service to four weeks. They must be given 6 weeks' notice in case of discharge.

Disputes between masters and domestic servants are to be settled by the ordinary courts, i. e., by the court of that locality in which the servant was in service at the time he brought suit. Regulations to be issued for the enforcement of the present law shall, however, provide for the establishment of special conciliation boards for the settlement of disputes between masters and domestic servants.

The law became effective May 1, 1920.

LABOR ORGANIZATIONS.

European Trade-Union Statistics.

Compiled by ALFRED MAYLANDER.

Germany.

ACCORDING to a recent issue of the *Correspondenzblatt*,¹ the General Federation of German Trade-Unions, with which at present 54 federations (*Verbände*) of trade-unions are affiliated, has a membership of more than 7,500,000. In the following table is shown the membership of affiliated federations having more than 100,000 members:

FEDERATIONS OF THE GERMAN FREE TRADE-UNIONS WITH A MEMBERSHIP OF MORE THAN 100,000 AT THE END OF FEBRUARY, 1920.

Federation.	Membership.	
	Before the war.	End of February, 1920.
Metal workers.....	531,991	1,600,000
Agricultural workers.....	22,531	650,000
Factory workers.....	207,330	600,000
Transport workers.....	228,207	540,000
Textile workers.....	133,034	450,000
Building trades.....	309,562	430,430
Mine workers.....	101,956	400,000
Railway men.....		400,000
Woodworkers.....	192,465	370,000
Salaried employees.....	35,219	367,000
Municipal workers.....	54,522	269,915
Tailors.....	49,145	136,000
Total.....	1,865,962	6,213,345

Thus the above 12 federations comprise more than 6,200,000 members, or 83 per cent of the entire membership of the General Federation. Ten more federations have a membership of more than 50,000, 11 of 20,000 to 50,000, 7 of 10,000 to 20,000, 12 of 1,000 to 10,000, and 2 of less than 1,000 members.

Of the entire membership somewhat more than 5,000,000 belong to industry, handicraft, and mining, 917,000 to commerce and transport, 650,000 to agriculture and forestry, 670,000 to State and municipal undertakings, 157,000 to the hotel and restaurant trade and musical and theatrical callings, and 38,000 to the domestic service group.

Austria.

THE annual report of the executive committee of the Austrian Federation of Trade-Unions (*Gewerkschaftskommission Deutsch-österreichs*) for the year 1919² shows that the total paying mem-

¹ *Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands*. Berlin, Mar. 6, 1920.

² *Die Gewerkschaft*. Vienna, Mar. 16, 1920.

bership of the unions affiliated with the federation was 378,381, as compared with 262,808 in 1918. The membership movement during the period 1913 to 1919 is shown in the following table:

PAYING MEMBERSHIP OF THE AUSTRIAN FEDERATION OF TRADE-UNIONS, 1913 TO 1919.

Year.	Paying membership.	Increase (+) or decrease (-).
1913.....	331,816	.....
1914.....	292,103	- 39,713
1915.....	154,281	-137,822
1916.....	130,697	- 23,584
1917.....	142,925	+ 11,598
1918.....	262,808	+120,513
1919.....	378,381	+115,573

It should be noted that the membership figures shown in the preceding table include only paying members, i. e., members having made 52 weekly contributions to their union during the year. During 1918 and 1919 unemployment was very extensive in German Austria and a large number of organized workers did not pay regularly their union dues. The actual membership of the Austrian trade-unions must therefore have been considerably larger than that shown in the table. In comparing the figures for 1919 with those of preceding years it should be considered that the peace treaty separated from Austria all crown lands of non-German nationality.

The increase in membership during the year 1919 is chiefly due to the affiliation of numerous organizations of nonindustrial wage-workers, such as bank employees, policemen's unions, postal and telegraph employees, domestic servants, hospital nurses, etc. Through the affiliation of these organizations the Federation of Austrian Trade-Unions has become the official representative not only of the industrial workers of Austria but of Austria's entire wage-earning population.

Czecho-Slovakian Republic.

A BROCHURE³ issued by Rod. Tayerle, secretary-general of the General Federation of Czecho-Slovak Trade-Unions, contains the following data as to membership of the unions affiliated with this federation.

MEMBERSHIP STATISTICS OF THE GENERAL FEDERATION OF CZECHO-SLOVAK TRADE-UNIONS, 1897-1918.

Year.	Federation.	Unions.	Membership.	
			Total.	Female.
1897.....	68	22	7,102	502
1907.....	59	796	71,001	2,393
1912.....	53	1,449	107,255	8,093
1914.....	50	1,135	55,175	5,268
1916.....	49	753	23,932	3,239
1917.....	50	766	42,728	6,468
1918.....	50	1,178	161,247	23,824

³ Les Syndicats Professionnels Tchécoslovaques. Paris, 1919. 22 pp.

Data for the year 1919 are not available. The brochure states, however, that at the end of June, 1919, 42 reporting federations show a membership of 450,896, of which 98,150 were women, and estimates the total membership, inclusive of nonreporting federations, at 500,000. This large increase is chiefly due to the affiliation of the German trade-unions in the German-speaking districts of Bohemia and Moravia with the Czecho-Slovak General Federation.

The strongest federations represented in the general federation are those of the metal workers with 95,130 members; agricultural workers with 90,000 members; miners with 49,654 members; railroad men with 42,262 members; unskilled workers with 35,656 members; textile workers with 29,616 members; building trades workers with 12,009 members; woodworkers with 14,769 members; and glass workers with 12,500 members. Women are strongly represented in agricultural unions (50,000), textile workers' unions (17,321), and unskilled workers' unions (7,996).

In 1918 the 50 federations affiliated with the general federation had receipts amounting to 2,544,846 crowns (\$516,603.74, par) and expenditures amounting to 1,828,903 crowns (\$371,267.31, par). Their combined capital was 2,875,077 crowns (\$583,640.63, par). They disbursed in benefits 451,107 crowns (\$91,574.72, par), of which 63,449 crowns (\$12,880.15, par) were for strike benefits and 124,366 crowns (\$25,246.30, par) for sick benefits. The general federation publishes a semimonthly bulletin, *Odborové Sdružení československe*, and since 1915 also a journal, *Zájmi Žen*, for its female members.

Hungary.

ACCORDING to an article in the *Correspondenzblatt*⁴ the trade-unions in Hungary had some 500,000 members in November, 1918. An immediate result of the revolution was that nearly all classes of workers, including railway men, civil-service employees, private salaried employees, teachers, brain workers, etc., began to organize, whereby it appeared that the new trade-unionists were more radical than the most extreme of the old organizations. The brain workers, especially, became ardent adherents of the soviet dictatorship, while the old unions, without exception, were opposed to it. The failure of the old trade-unions to support the soviet government was the prime cause of its collapse.

The first effect of the debacle of the communistic régime was the closing of all industrial establishments. The owners took back the socialized undertakings into their own hands, dismissed the workers, and proceeded to take stock of what was left to them. Extensive unemployment continues up to the present date, scarcely 10 to 15 per cent of the workers being employed. In Budapest about 200,000 workers are idle, and in the provincial towns matters are not much better.

The radicalism of the new unions founded since November, 1918, did not stand the test of such severe trials. Part of them, especially the unions of the brain workers, speedily took refuge in the Christian-National camp and many of the newly founded ultraradical unions became now ultra reactionary. Thus ended the supercommunists of

⁴ *Correspondenzblatt der Generalkommission der Gewerkschaften Deutschlands*. Berlin, Mar. 6, 1920.

the Hungarian commune. Although the old conservative unions were opposed to the soviet, the new Government seizes every pretext to persecute them. In the provinces the military functionaries of the new Government arbitrarily dissolved all trade-unions and seized their funds. Since August, 1919, thousands of organized workers have been thrown into prison or interned in concentration camps, although no indictable offense has been proved against them.

Holland.

THE Dutch Federation of Trade-Unions (*Nederlandsch Verbond van Vakverenigingen*) reports⁵ that on January 1, 1920, the movement numbered 247,870 members. During 1919 the membership increased by 56,805, as against an increase of 28,000 in 1917, and 31,000 in 1918. During the last quarter of 1919 the number of male members increased by 17,120 and that of female members by 1,412

Denmark.

THE progress of the trade-union movement in Denmark during 1919 is illustrated in *Social-Demokraten*⁶ from figures published by the Danish Trade-Union Association.

The total number of workers organized in unions was 360,016 at the end of 1919. Of these, 277,392 were affiliated with the association, as compared with 255,150 at the end of 1918. Of the affiliated organizations the growth of membership has been largest in the Danish General Workers' Union, with an increase of 5,454, in the Textile Workers' Union with 2,754, in the Agricultural Workers' Union with 2,000, in the Municipal Workers' Union with 1,628, the Smiths' and Machinists' Union with 1,231, and the Railway men's Union with 1,202.

Among the nonaffiliated organizations the telephone workers record an increase from 3,200 to 5,300 members, the mercantile clerks from 19,800 to 29,770. The Bricklayers' Union shows a decrease in membership from 8,024 to 6,324.

Switzerland.

IN SWITZERLAND the individual trade-unions were so busy during the last two years with wage movements, the development of their organization, and benevolent institutions that their reports to their central organization, the *Gewerkschaftsbund*, were greatly delayed. Owing to this delay the *Gewerkschaftsbund* was but lately able to publish statistics on the Swiss trade-union movement for the year 1918.⁷ At the end of that year the unions affiliated with the *Gewerkschaftsbund* had 177,143 members, of which 26,647 were women. The increase in membership over the preceding year was 29,446. The report states, however, that 85,076 new members were admitted during 1918. As the increase in membership at the end of the year was only 29,446 there must have been a large number of resignations. During the year under review the switchmen's, loco-

⁵ Rotterdamsche Courant. Rotterdam, Mar. 27, 1920.

⁶ Social-Demokraten. Copenhagen, Mar. 17, 1920.

⁷ Die Gewerkschaft. Vienna, Feb. 24, 1920.

motive engineers', and trainmen's unions are the only ones having experienced a decrease in membership. This decrease was largely due to curtailment in the operation of trains. The following unions showed the largest increases in membership: Building trades, workers in communal and State employment, workers in foodstuff industries, mercantile and transport establishments, woodworkers, textile and metal workers. The cities having the largest number of organized workers were Zürich (22,662), Basel (14,172), and Bern (12,385). The three cantons of the same name had likewise the largest number of trade-union members among their population, the number of trade-union members being 44,367 in the Canton of Zürich, 35,934 in the Canton of Bern, and 14,172 in the Canton of Basel (city).

The membership dues had to be increased considerably during 1918, owing to increased expenditures. In 1917 the highest weekly membership dues were 1.85 francs (35.7 cents, par); in 1918, however, 2.25 francs (43.4 cents, par). The annual receipts of the trade-unions totaled 5,242,808 francs (\$1,011,861.94, par). Included in this sum are State and cantonal subsidies in the amount of 169,918 francs (\$32,791.17, par) for unemployment funds and of 156,900 francs (\$30,281.70, par) for sick funds. The expenditures of the union amounted to 5,347,394 francs (\$1,032,047.04, par), and thus exceeded the receipts for the year. Seventy-one and four-tenths per cent of the expenditures were for benefits.

The Gewerkschaftsbund reports 1,800 wage movements for the year 1918, affecting 9,253 establishments and 325,240 workers. The great majority of these movements, 1,533 affecting 7,786 establishments with 300,868 workers, did not involve any stoppage of work. In 264 instances, affecting 1,464 establishments and 24,318 workers, the wage movement culminated in a strike, and in four instances affecting three establishments and 64 workers in a lockout. The total loss of wages through labor disputes was 2,230,294 francs (\$430,446.74, par). Strike benefits for 289,860 days were paid in the amount of 894,650 francs (\$172,667.45, par) by central labor organizations and in the amount of 162,967 francs (\$31,452.63, par) by local labor organizations. The average number of days lost per striker was 12. Most of the wage movements terminated with partial success for the workers, only 71, or 4 per cent, failed entirely. The wage increases obtained totaled 2,562,064 francs (\$494,478.35, par) per week. The curtailment of hours of labor shows a total gain of 320,614 hours per week, or of 3½ hours for the individual worker. Collective agreements affecting 2,414 establishments and 15,274 workers were concluded in 202 instances.

The report states that at the end of the first six months of 1919 the membership of the unions affiliated with the Gewerkschaftsbund had passed the 200,000 mark.

STRIKES AND LOCKOUTS.

Strikes and Lockouts in the United States, 1916, 1917, 1918, and 1919.

Compiled by EDSON L. WHITNEY.

DURING the past six years the United States Bureau of Labor Statistics has kept a record of such strikes in this country as have come to its attention. The department has no authority to require reports relative to strikes from anyone, and therefore is obliged to obtain its information in such way as it can from such sources as are available. During these six years this information has been obtained from agents of the Bureau in the field, reports of commissioners of conciliation of the Department of Labor and other similar boards, reports of the various State labor boards, lists of strikes issued by labor, trade, and other organizations, and from clipping bureaus, supplemented by an examination of 25 daily papers printed in the more important industrial cities of the country, 100 or more labor papers, as many trade-union periodicals, and 20 leading trade papers. During the year 1919, 6,931 circulars of inquiry asking information in regard to about 3,500 reputed strikes and lockouts were sent to employers reported to have had strikes in their establishments and to officials of unions whose members had been concerned in or were believed to have knowledge of labor troubles. Of this number 2,222 were returned answered in whole or in part, 351 were returned undelivered for various reasons, and the remainder were unanswered. In addition 206 letters were sent. While this report, based on the data secured from the above-mentioned sources, omitting such reputed strikes as the returned schedules of inquiry indicated had been erroneously reported, is not based on a complete list of all strikes that have occurred in the country during the years under review, for such a list is unobtainable, it is believed that no strikes of importance have failed to come to the attention of the Bureau, and that the report is reasonably complete. Statistics for the four years 1916, 1917, 1918, and 1919 are given for purposes of comparison of two years of the war with the years immediately preceding and following.

The table following shows the number of strikes and lockouts beginning in each month during 1916, 1917, 1918, and 1919:

TABLE 1.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH MONTH, 1916, 1917, 1918, AND 1919.

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Month not stated.	Total.
Strikes:														
1916.....	180	203	289	419	604	310	310	318	217	257	193	147	174	3,681
1917.....	274	204	308	431	451	313	414	353	340	317	251	184	454	4,324
1918.....	183	212	300	308	385	289	279	273	197	145	202	230	220	3,232
1919.....	184	183	175	218	388	393	360	373	377	296	145	94	127	3,253
Lockouts:														
1916.....	8	3	5	15	13	14	3	8	5	4	4	2	24	108
1917.....	14	7	10	14	12	10	4	7	9	4	6	12	17	126
1918.....	8	11	11	11	6	6	6	5	10	-----	5	10	16	105
1919.....	5	7	6	14	25	12	6	10	13	8	6	6	3	121
Total:														
1916.....	188	206	294	434	617	354	313	326	252	261	197	149	198	3,789
1917.....	288	211	318	445	463	323	448	360	349	321	257	196	471	4,450
1918.....	191	223	311	319	391	295	285	278	207	145	207	249	236	3,337
1919.....	189	190	181	262	413	315	366	383	390	304	151	100	130	3,374

The large increase in number of strikes during the month of May in each year is accounted for by the fact that the trade agreements in many industries terminate on the 30th day of April and the unions very generally ask for an increase in wages in making the new agreement with their employers. Reports for the closing months of the year 1919 are incomplete, since reports, aside from those obtained from the daily and weekly papers and periodicals, frequently do not reach the Bureau until several months after the strike has ended. Corrected figures for these months will therefore undoubtedly show an increase over those here given.

Although the number of strikes during 1919 was not appreciably larger than in 1918 and was less than in 1916 or 1917, the number of persons on strike during the year 1919 was greatly in excess of the number on strike in any of the three preceding years, due to the number of strikes in which large numbers of persons were involved. The strike in which the largest number of persons was involved in 1916 was the men's clothing strike in New York City in December of that year, involving 60,000 employees. No strike in 1917 involved as many as 40,000 persons. In 1918 the strike involving the largest number of persons was that of machinists in northern New Jersey in July, where 60,000 persons struck.

In 1919 there were nine disturbances in each of which 60,000 or more persons were directly concerned: A general strike in Tacoma and Seattle in February in sympathy with the metal-trades strikers, in which 60,000 persons were involved; 65,000 employees in the Chicago stockyards struck in August; 100,000 longshoremen along the Atlantic coast struck in October; 100,000 employees in the shipyards of New York City and vicinity struck in October; 115,000 members of the building trades were locked out in Chicago in July; 125,000 in the building trades in New York City struck in February; 250,000 railroad shop workers struck in August; 367,000 iron and steel workers struck in September; and 435,000 bituminous coal

miners struck in November. The number of persons concerned in these nine strikes and lockouts was upward of 1,600,000, while the total number of persons involved in strikes and lockouts during 1919 was 4,112,507.

The strikes of 1919 have not been accompanied by the violence and loss of life that have at times characterized the strikes of former years, due perhaps to the fact that employers more frequently closed their establishments during the strike, and employed strike breakers in a less number of cases. On the other hand, the number of working days lost in 1919 increased greatly and the average duration of strikes was nearly twice that in each of the preceding three years. It is difficult to particularize, for many of the strikes involving a few thousand persons caused the public more inconvenience than some of those involving many times that number. Many of the larger strikes occurred in New York City and vicinity, where, in addition to those already mentioned, 35,000 waist and dress makers struck in January, 50,000 cloak and suit makers in May, 25,000 shirt makers in July, 50,000 men's clothing workers in October, 16,000 millinery workers in September, 10,000 rag pickers and paper sorters in March, as many paper box makers in August, and as many pressmen in October, 14,000 painters in August, 15,000 shoe workers in February, 15,000 street car men in August, 16,000 marine workers in January, 17,000 harbor workers in March, 18,000 teamsters in October, 20,000 longshoremen in March, 25,000 ship-builders in November, 40,000 tobacco workers in July, and 40,000 tug and ferrymen in October. In March, 12,000 woolen operatives struck in Passaic, 24,000 silk workers in Paterson in February and 17,000 again in August, 32,000 textile workers in Lawrence in February, 30,000 in New Bedford in May, and 35,000 in Fall River in December. In July, 40,000 marine workers along the Atlantic coast struck, 20,000 meat cutters in cities along the Atlantic coast in August and again in October, 12,000 telephone operators in New England in April, 15,000 street railway men in Chicago in July, 10,000 building laborers in Chicago in June, followed by 13,000 carpenters in July, 15,000 carpenters in Columbus, Ohio, in May, 17,000 machinists in Toledo in May, 15,000 miners in Illinois in July, 10,000 railroad shopmen in western Pennsylvania in October, 15,000 steel workers in Pennsylvania in July, 43,000 anthracite miners in Pennsylvania in September, 10,000 tobacco workers in Philadelphia and 11,000 in Allentown in July, 15,000 in Porto Rico in January, and as many more in Tampa in October, 10,000 men in the building trades in Dallas in June, 28,000 metal workers in Seattle in January, and 25,000 workers in the shipyards of San Francisco and vicinity in February and 40,000 more in October.

The table following shows the number of strikes and lockouts in 1916, 1917, 1918, and 1919, by States and by sections of the country.

TABLE 2.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN EACH YEAR, BY STATES AND SECTIONS, 1916, 1917, 1918, AND 1919.

State or section.	Strikes.				Lockouts.			
	1916	1917	1918	1919	1916	1917	1918	1919
Alabama.....	14	17	13	15	1	3		1
Alaska.....	3	5	2	3			1	
Arizona.....	7	20	3	7			1	
Arkansas.....	20	36	11	6				
California.....	54	105	92	89	1	7	2	6
Canal Zone.....	4			1				
Colorado.....	17	46	29	30		2	3	1
Connecticut.....	325	178	90	120	1		2	3
Delaware.....	12	17	14	8				
District of Columbia.....	7	14	13	8	1			1
Florida.....	9	14	18	28		2	2	
Georgia.....	8	26	37	34		2	3	4
Hawaii.....	4	1	1					
Idaho.....	5	32	10	10				
Illinois.....	149	276	237	252	10	6	11	10
Indiana.....	70	65	68	91	5	8	8	9
Iowa.....	25	63	39	50	1	2	2	6
Kansas.....	15	51	40	44		2	1	1
Kentucky.....	11	37	17	25	2	1	2	
Louisiana.....	7	39	16	28	1			2
Maine.....	30	40	36	36				2
Maryland.....	45	56	69	32	3	3	1	
Massachusetts.....	374	342	341	376	9	11	4	6
Michigan.....	66	62	59	79	5	2	1	
Minnesota.....	24	52	40	49	6	1		1
Mississippi.....	4	13	4	2			1	
Missouri.....	90	117	100	63	7	5	5	2
Montana.....	14	74	32	19	1	3	1	2
Nebraska.....	21	27	11	17		1		
Nevada.....		2	6	4				
New Hampshire.....	20	20	17	32				1
New Jersey.....	411	219	138	171	6	8		4
New Mexico.....		4	2					
New York.....	577	696	668	515	15	15	21	7
North Carolina.....	7	7	12	19			1	3
North Dakota.....		2	3					
Ohio.....	278	265	188	214	14	14	9	8
Oklahoma.....	24	33	17	26		2	2	2
Oregon.....	22	57	18	32	1	1		1
Pennsylvania.....	566	481	304	265	8	13	7	10
Porto Rico.....	23	6	5	3				
Rhode Island.....	76	103	53	74	1	2		1
South Carolina.....	5	7	3	6				
South Dakota.....		2	3	3		1		
Tennessee.....	24	40	23	34	2	2	3	8
Texas.....	28	56	37	51			3	4
Utah.....	3	21	12	20			2	2
Vermont.....	10	8	9	12				
Virginia.....	14	34	36	24	2	1	1	2
Washington.....	57	290	126	78	1	4	2	
West Virginia.....	39	64	49	56	1		1	4
Wisconsin.....	61	55	52	71	2	2	2	7
Wyoming.....		2	5	3				
Interstate.....	4	25	4	21				
Total.....	3,681	4,324	3,232	3,253	108	126	105	121
North of the Ohio and east of the Mississippi.....	3,110	2,974	2,400	2,412	80	85	66	72
South of the Ohio and east of the Mississippi.....	165	304	233	248	9	11	11	20
West of the Mississippi.....	406	1,046	599	591	19	30	25	29

The largest number of disputes occurred in the leading manufacturing States—New York, Massachusetts, Pennsylvania, Ohio, and Illinois—nearly one-half the strikes being in these States.

The table following shows the number of strikes and lockouts in cities in which 25 or more disputes occurred during 1916, 1917, 1918, or 1919.

TABLE 3.—NUMBER OF STRIKES AND LOCKOUTS IN CITIES IN WHICH 25 OR MORE DISPUTES OCCURRED IN 1916, 1917, 1918, OR 1919

City.	1916	1917	1918	1919	City.	1916	1917	1918	1919
Baltimore, Md.	39	36	45	22	New Orleans, La.	7	23	15	25
Boston, Mass.	62	86	66	95	New York, N. Y.	363	484	484	360
Bridgeport, Conn.	38	30	13	22	Paterson, N. J.	18	27	20	15
Buffalo, N. Y.	41	28	24	19	Philadelphia, Pa.	74	89	80	60
Chicago, Ill.	73	123	100	124	Pittsburgh, Pa.	47	37	19	17
Cincinnati, Ohio.	29	33	26	36	Providence, R. I.	21	46	18	30
Cleveland, Ohio.	60	76	39	47	Rochester, N. Y.	16	27	35	11
Denver, Colo.	8	26	19	22	San Francisco, Calif.	23	37	30	33
Detroit, Mich.	31	19	18	37	St. Louis, Mo.	58	53	70	36
Fall River, Mass.	20	13	18	28	Seattle, Wash.	15	49	28	18
Hartford, Conn.	28	21	8	15	Springfield, Mass.	31	27	12	20
Holyoke, Mass.	26	9	17	16	Toledo, Ohio.	16	16	27	24
Jersey City, N. J.	28	24	7	24	Trenton, N. J.	25	15	11	4
Kansas City, Mo.	20	36	20	16	Wilkes-Barre, Pa.	6	25	8	4
Milwaukee, Wis.	30	11	11	25	Worcester, Mass.	18	12	11	27
Newark, N. J.	55	50	36	30	Youngstown, Ohio.	27	1	5	13

The table following shows, by sex of persons involved, the number of strikes and of lockouts occurring during the four years under consideration:

TABLE 4.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1916, 1917, 1918, AND 1919, BY SEXES.

Sex.	Strikes.				Lockouts.			
	1916	1917	1918	1919	1916	1917	1918	1919
Males.....	3,045	3,513	2,380	2,599	76	99	76	70
Females.....	122	158	87	86			3	1
Males and females.....	260	184	263	478	9	6	11	21
Not reported.....	254	469	502	90	23	21	15	29
Total.....	3,681	4,324	3,232	3,253	108	126	105	121

In 1919 the employees were connected with unions in 1,811 strikes and 102 lockouts; they were not connected with unions in 135 strikes and 1 lockout; in 27 strikes and 2 lockouts they were not so connected at the time of striking, but organized almost immediately thereafter; in 1,280 strikes and 16 lockouts the relation of employees to unions was not reported. In 1918 the corresponding figures were 1,830 strikes and 73 lockouts, 358 strikes and 4 lockouts, 26 strikes, and 1,018 strikes and 28 lockouts. In 1917 the figures were 2,297 strikes and 95 lockouts, 206 strikes and 3 lockouts, 55 strikes, and 1,766 strikes and 28 lockouts. In 1916 the figures were 2,364 strikes and 94 lockouts, 441 strikes and 5 lockouts, 70 strikes and 1 lockout, and 806 strikes and 8 lockouts.

The causes of strikes and lockouts were numerous. Aside from wages few strikes occurred in which the cause was confined to one matter in dispute. The principal causes are shown in the table following.

TABLE 5.—PRINCIPAL CAUSES OF STRIKES AND LOCKOUTS BEGINNING IN 1916, 1917, 1918, AND 1919.

Matter of dispute.	Strikes.				Lockouts.			
	1916	1917	1918	1919	1916	1917	1918	1919
Increase of wages.....	1,290	1,554	1,378	999	11	17	14	24
Decrease of wages.....	33	34	34	80	2	2	2	3
Nonpayment of wages.....	13	17	31	9		1		
Increase of hours.....	3	18	6	8	4			8
Decrease of hours.....	111	127	79	106	2	5		9
Increase of wages and decrease of hours.....	479	374	251	554	2	4	2	31
Recognition of the union.....	344	275	188	366	22	39	35	5
Recognition and wages.....	122	149	95	127	2	5	2	1
Recognition and hours.....	22	27	18	19	1	1		7
Recognition, wages, and hours.....	68	56	66	178	5			
General conditions.....	59	100	59	65		4	2	1
Conditions and wages.....	55	70	52	54	2	1	2	
Conditions and hours.....	3	17	2	5		1		
Conditions, wages, and hours.....	25	26	8	37				
Conditions and recognition.....		13	7	14				
Discharge of foreman demanded.....	17	37	54	15		1		
Discharge of employees.....	122	204	138	141	5	3		
Employment of nonunion men.....	70	76	62		4	1		4
In regard to the agreement.....	38	80	42	33	2	3	1	
New agreement.....	37	22	4	36	3	2		
Sympathy.....	32	70	34	100	1	1	1	
Jurisdiction.....	19	21	16	15				1
Miscellaneous.....	120	183	172	91	7	5	9	15
Not reported.....	598	774	436	201	33	30	35	12
Total.....	3,681	4,324	3,232	3,253	108	126	105	121

The number of persons involved in strikes and lockouts is shown in the table following:

TABLE 6.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1916, 1917, 1918, AND 1919, BY CLASSIFIED NUMBER OF PERSONS INVOLVED.

Number of persons involved.	Strikes.				Lockouts.				Number of persons involved.	Strikes.				Lockouts.			
	1916	1917	1918	1919	1916	1917	1918	1919		1916	1917	1918	1919	1916	1917	1918	1919
1 to 10.....	197	184	143	158	13	7	9	7	501 to 1,000.....	238	193	139	202	3	1	2	10
11 to 25.....	345	295	266	250	10	8	11	9	1,001 to 10,000...	233	219	200	312	5	4	4	9
26 to 50.....	412	341	328	310	15	9	9	13	Over 10,000.....	22	67	16	53	1	1	1	1
51 to 100.....	413	358	344	357	7	3	13	13	Not reported.....	1,078	2,045	1,152	845	44	80	34	27
101 to 250....	395	358	369	436	4	10	13	19	Total.....	3,681	4,324	3,232	3,253	108	126	105	121
251 to 500....	348	284	275	328	6	3	9	13									

In 1919, in 2,399 strikes and 94 lockouts the number of persons involved was reported to be 3,950,411 and 162,096, respectively, or an average of 1,647 in strikes and 1,724 in lockouts. In 1918, in 2,080 strikes and 71 lockouts the number of persons involved was reported to be 1,196,928 and 43,061, respectively, or an average of 575 in strikes and 605 in lockouts. In 1917, in 2,279 strikes and 46 lockouts the number of persons involved was reported to be 1,208,121 and 19,133, or an average of 530 and 416, respectively. In 1916, in 2,603 strikes and 64 lockouts the number of persons involved was reported to be 1,546,735 and 53,182, or an average of 594 and 831, respectively.

TABLE 7.—INDUSTRY GROUPS IN WHICH THE LARGEST NUMBER OF STRIKES AND LOCKOUTS OCCURRED IN 1916, 1917, 1918, AND 1919.

Industry.	Strikes.				Lockouts.			
	1916	1917	1918	1919	1916	1917	1918	1919
Building trades.....	376	447	416	424	18	21	16	18
Clothing industries.....	222	483	416	301	5	12	18	7
Furniture industry.....	48	40	25	44	2	3	1	3
Iron and steel workers.....	72	56	72	67	.....	.....	2	8
Leather workers.....	34	19	15	27	.....	.....	1	5
Lumber industry.....	44	295	75	39	.....	4	1	2
Meat cutting.....	70	38	39	67	.....	2	.....	2
Metal trades.....	547	513	439	527	14	31	23	29
Mining.....	402	418	184	170	3	2	5	2
Paper manufacturing.....	51	39	35	41	2	1	.....	3
Printing and publishing.....	25	40	39	58	4	3	.....	3
Shipbuilding.....	27	103	136	101	.....	.....	3	1
Stonework.....	59	26	14	13	2	.....	.....	.....
Textile industry.....	258	242	209	258	3	5	3	9
Tobacco.....	61	45	47	54	2	2	2	2
Transportation.....	224	342	226	231	4	1	1	3

TABLE 8.—OCCUPATIONS IN WHICH THE LARGEST NUMBER OF STRIKES AND LOCKOUTS OCCURRED IN 1916, 1917, 1918, AND 1919.

Occupation.	Strikes.				Lockouts.			
	1916	1917	1918	1919	1916	1917	1918	1919
Bakers.....	66	92	41	63	15	13	4	7
Boiler makers.....	23	45	28	29	.....	1	.....	.....
Boot and shoe workers.....	44	37	48	49	1	1	2	3
Brewery workers.....	19	22	27	20	2	.....	.....	2
Brickmakers and clay workers.....	22	9	5	16	1	.....	.....	1
Building laborers and hod carriers.....	53	72	27	48	1	2	.....	.....
Carpenters.....	73	98	76	84	2	3	3	4
Freight handlers.....	41	59	24	5	.....	.....	.....	.....
Glassworkers.....	40	20	13	8	.....	2	.....	.....
Hat and cap makers and fur workers.....	22	50	34	36	1	3	.....	.....
Inside wiremen.....	32	33	45	29	4	2	4	1
Longshoremen.....	68	61	30	37	.....	.....	.....	1
Machinists.....	255	198	205	195	8	13	7	16
Metal polishers.....	40	23	24	55	2	6	1	5
Miners, coal.....	370	350	156	143	3	2	5	2
Molders.....	145	161	109	167	3	5	6	5
Painters and paper hangers.....	45	41	58	75	.....	4	1	3
Plumbers and steam fitters.....	52	53	71	53	1	4	3	1
Rubber workers.....	37	17	15	13	1	.....	1	1
Sheet-metal workers.....	20	32	45	17	1	2	.....	.....
Street railway employees.....	55	118	117	105	3	1	.....	1
Structural-iron workers.....	23	15	19	12	1	.....	.....	1
Tailors.....	32	53	48	66	.....	1	1	2
Teamsters.....	108	164	129	88	6	6	2	.....

In 1919, in 3,149 strikes and 116 lockouts the number of establishments involved in each was stated. Only 1 establishment was involved in each case in 1,945 strikes and 88 lockouts, 2 establishments in 131 strikes and 4 lockouts, 3 in 94 strikes, 4 in 51 strikes and 3 lockouts, 5 in 48 strikes and 2 lockouts, over 5 in 880 strikes and 19 lockouts. In 1918, in 2,987 strikes and 109 lockouts, the number of establishments involved in each was stated. Only 1 establishment was involved in 2,460 strikes and 80 lockouts, 2 establishments in 66 strikes and 4 lockouts, 3 in 41 strikes and 1 lockout, 4 in 23 strikes, 5 in 90 strikes, and over 5 in 307 strikes and 24 lockouts. In 1917, in 3,643 strikes and 113 lockouts, the number of establishments involved in each was stated. In each case only 1 establishment was

involved in 2,994 strikes and 84 lockouts, 2 establishments in 140 strikes and 3 lockouts, 3 in 69 strikes and 4 lockouts, 4 in 41 strikes, 5 in 18 strikes, over 5 in 381 strikes and 22 lockouts.

Tables 9, 10, and 11 relate to those strikes and lockouts which were reported to have ended during the four years under consideration:

TABLE 9.—NUMBER OF STRIKES AND LOCKOUTS ENDING IN EACH MONTH DURING 1916, 1917, 1918, AND 1919.

Year.	Janu- ary.	Feb- ruary.	March.	April.	May.	June.	July.	Aug- ust.	Sep- tem- ber.	Octo- ber.	No- vem- ber.	De- cem- ber.	Month not stated.	Total.
Strikes:														
1916.....	114	129	173	289	330	213	209	213	217	171	151	76	119	2,395
1917.....	108	92	155	191	211	168	155	153	196	175	120	128	169	2,015
1918.....	103	123	160	197	258	217	203	203	165	140	113	159	75	2,116
1919.....	116	105	113	139	214	185	191	223	216	173	139	101	51	1,961
Lockouts:														
1916.....	3	3	3	3	7	3	2	4	6	2	5	2	12	53
1917.....	3	2	4	7	9	4	6	3	5	2	4	4	11	58
1918.....	2	1	6	19	3	5	6	3	5	6	4	4	9	64
1919.....	2	2	5	8	3	7	5	6	8	8	3	1	2	68
Total:														
1916.....	117	132	176	292	337	216	200	217	223	173	156	78	131	2,448
1917.....	111	94	159	198	223	172	157	156	201	177	122	132	171	2,073
1918.....	105	124	166	207	261	222	209	206	170	146	117	163	81	2,180
1919.....	118	107	118	138	222	192	195	234	224	181	142	105	53	2,029

TABLE 10.—RESULTS OF STRIKES AND LOCKOUTS ENDING IN 1916, 1917, 1918, AND 1919.

Result.	Strikes ending in—				Lockouts ending in—			
	1916	1917	1918	1919	1916	1917	1918	1919
In favor of employers.....	727	382	450	624	21	13	6	18
In favor of employees.....	733	614	619	533	16	17	15	16
Compromised.....	766	698	668	729	11	21	17	11
Employees returned pending arbitra- tion.....	70	131	200	42	3	6	5	3
Not reported.....	99	190	188	33	2	1	21	20
Total	2,395	2,015	2,116	1,961	53	58	64	68

TABLE 11.—DURATION OF STRIKES AND LOCKOUTS ENDING IN 1916, 1917, 1918, AND 1919.

Duration.	Strikes ending in—				Lockouts ending in—				Duration.	Strikes ending in—				Lockouts ending in—			
	1916	1917	1918	1919	1916	1917	1918	1919		1916	1917	1918	1919	1916	1917	1918	1919
Less than 1 day.....	38	88	84	25					15 to 18 days.....	142	74	84	105	6	1	4	4
1 day.....	141	194	143	73		2	2		19 to 21 days.....	82	44	67	85	1	2	2	5
2 days.....	183	111	168	64	2	2	3	1	22 to 24 days.....	39	22	37	47	1	1		3
3 days.....	146	102	124	74	1	3			25 to 28 days.....	60	32	33	62	1	3	2	
4 days.....	124	61	111	73	1	1	1		29 to 31 days.....	53	28	56	59			2	8
5 days.....	130	58	68	65	1	1			32 to 35 days.....	25	27	27	55				3
6 days.....	109	65	66	39	3				36 to 42 days.....	48	37	37	74	2	1	1	2
7 days.....	91	93	113	57	2	2	2	2	43 to 49 days.....	22	26	31	72	2	3	1	4
8 days.....	85	29	59	66	1		3	1	50 to 63 days.....	53	37	40	115			8	8
9 days.....	43	29	38	32	2	2			64 to 77 days.....	39	19	16	66	1	3		2
10 days.....	105	42	54	49	2	1		2	78 to 91 days.....	26	11	15	52	1	1		2
11 days.....	40	24	24	27	1				92 to 199 days.....	87	51	28	137	12	4	2	7
12 days.....	42	39	25	23			1	1	Over 200 days.....	17	9	21	18	6			3
13 days.....	26	13	17	29	1				Not reported.....	332	614	483	279		24	28	9
14 days.....	61	39	47	39	3	1	2		Total	2,395	2,015	2,116	1,961	53	58	64	68

In 1919 the total duration of these strikes was 57,885 days, and of the lockouts 2,215 days, the average duration of the former being 34 days and of the latter 38 days. In 1918 the total duration of these strikes was 28,779 days and of the lockouts 1,116 days, the average duration of the former being 18 days and of the latter 31 days. In 1917 the total duration of these strikes was 25,077 days and of the lockouts 1,904 days, the average of the former being 18 days and of the latter 56 days. In 1916 the total duration of the strikes was 46,305 days and of the lockouts 3,375 days, an average of 22 days and 64 days, respectively.

Included in the above table as "not reported" are 81 strikes and 2 lockouts in 1919, 127 strikes and 4 lockouts in 1918, and 200 strikes and 3 lockouts in 1917, designated in the reports as "short," but their exact duration not being given.

In addition, there were, in 1919, 175 strikes and 13 lockouts; in 1918, 79 strikes and 8 lockouts, and in 1917, 95 strikes and 1 lockout in which the places of the employees were filled very soon after the strike occurred, and the work became normal in a few days, but the Bureau has no record that these disturbances were ever formally settled.

In 1919 the number of unauthorized strikes of which the Bureau has information was 125, involving 1,053,256 strikers. In 1918 the number was 58 and in 1917, 72. Between April 6, 1917, the date of our entrance into the war, and November 11, 1918, the date of signing the armistice, 6,205 strikes and lockouts occurred.

The table following shows the number of strikes and lockouts in 1918 and 1919 in the leading industries and occupations, by States:

TABLE 12.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1918 AND 1919, IN SPECIFIED OCCUPATIONS, BY STATES.

Strikes.

State.	Bakers.		Barbers.		Brass and brass-goods workers.		Brewery and soft-drink workers.		Brick-makers and clay workers.		Broom makers.		Building trades.			
													Brick-layers.		Car-penters.	
	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
Alabama.....				1											1	
Arizona.....																1
Arkansas.....															3	2
California.....	2	6	3				1	2		1		1	2		1	2
Colorado.....			1											1	5	1
Connecticut.....				2		3		1						1		1
Delaware.....															2	
District of Columbia.....	1						1									1
Florida.....			1												1	3
Georgia.....			1									2	1		6	3
Illinois.....	2	6	1	1	1		3	2		1		2			1	3
Indiana.....		2		1		1	1	3		1			1			3
Iowa.....		6	1							1			1		2	1
Kansas.....								2								
Kentucky.....		2					1								1	1
Louisiana.....	1											1			1	3
Maine.....	1					1							1			3
Maryland.....		1		1					2						10	11
Massachusetts.....	5	2			1	1	5	1					1	1	1	3
Michigan.....	1					1	1							2	1	1
Minnesota.....		1					1								1	
Mississippi.....													1		2	
Missouri.....	1	2			1	2	1									
Montana.....		1	1													
Nebraska.....							1									4
New Hampshire.....										1					5	7
New Jersey.....	4	6		1											9	10
New York.....	12	5	7	8		3	3	4		4	1	1	1		5	
North Carolina.....																
North Dakota.....			1				2	1	1	2	2		1	2	4	3
Ohio.....	3	3	1										1			
Oregon.....		1														
Pennsylvania.....	3	3	2	1	1		3			4			1	1	6	6
Porto Rico.....	1														1	2
Rhode Island.....		2					1	1					1	1	1	1
South Dakota.....		2											1		1	3
Tennessee.....	1						1							1	3	2
Texas.....	2	1	1					3							1	1
Utah.....		3														
Vermont.....		1													1	2
Virginia.....		2														
Washington.....		5	1	2			1		1					1	1	
West Virginia.....													1		1	3
Wisconsin.....	1		2													
Total.....	41	63	24	18	4	15	27	20	5	15	1	8	13	12	76	84

Lockouts.

Connecticut.....		1														1
Indiana.....		1														
Iowa.....										1						
Kansas.....			1													
Maine.....																
Maryland.....	1															
Massachusetts.....	2															1
Montana.....													1		1	
New York.....	1	2						1							1	1
North Carolina.....																
Ohio.....		1														
Rhode Island.....		1													1	1
Tennessee.....																
Texas.....								1								
Total.....	4	7						2		1			1		3	4

TABLE 12.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1918 AND 1919, IN SPECIFIED OCCUPATIONS, BY STATES—Continued.

Strikes.

State.	Building trades—Continued.															
	Cement work- ers.		Inside wire- men.		Lath- ers.		Labor- ers and hod- car- riers.		Paint- ers and paper hang- ers.		Plas- terers.		Plumb- ers and steam fitters.		Roof- ers.	
	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
Alabama.....			2	1										1		
Arkansas.....													1	1		
California.....	1		2	2					1	2			1	2	1	
Colorado.....							1	1	2	4			1	1		
Connecticut.....					1	1	1	6	1	1			5	1		
Delaware.....									1							
District of Columbia.....									1		1	1	1			
Florida.....			1	1			1	1	1	1						
Georgia.....			1	1			1		1	1			1			
Idaho.....														1		
Illinois.....			4	1			2	2	6	3			5	4		1
Indiana.....	1		6	2			3	2	1		1	4	3			
Iowa.....	1		3				3	1	2	2	2	2	2	2		
Kansas.....							1		1				2	2		
Kentucky.....							1							2		
Louisiana.....								1								
Maine.....								2	3				1			
Maryland.....											1					
Massachusetts.....			3	1	1	7	12	7	8		2	6	7	1		
Michigan.....			2	2			2	3	2			3	1			
Minnesota.....		1	1				1	1	1	3		1				
Mississippi.....													1			
Missouri.....			1	2			1	2	1	1	1	1	1	1		1
Montana.....			2		1		1	1	1	1	1	1	1			
Nebraska.....							1	1								
New Hampshire.....		1							1	2		1		1		
New Jersey.....			2	1			1	1	1	8			2	3		
New York.....	1		1	1			4	4	3	6	3	14	6			
North Carolina.....			2	2	2	1	3	7	6		1		6	5	1	
Ohio.....																
Oklahoma.....			1					1								
Oregon.....		1							1							
Pennsylvania.....	1		3	2			1	1	3	4			4	3		
Rhode Island.....			1				1	3	1	1	1		1	4		
Tennessee.....			1						1	1			1	1		
Texas.....			2	3					3	2			1			
Utah.....							1	1								
Vermont.....													1			
Virginia.....			1	1	1			1	1		1		2	1		
Washington.....	1						2		4							
West Virginia.....			1	1			1						2			
Wisconsin.....			5	2			1	1	4				1	2		
Wyoming.....			1				2									
Total.....	6	3	45	29	1	4	27	43	58	75	8	12	71	53	3	2

Lockouts.

California.....				1					1							
Connecticut.....													1			
Illinois.....			2													
Indiana.....									1							
Missouri.....											1	1	1			
Ohio.....														1		
Tennessee.....									1							
Texas.....			1										1			
Utah.....									1							
Washington.....			1													
Total.....			4	1					1	3	1	1	3	1		

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TABLE 12.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1918 AND 1919, IN SPECIFIED OCCUPATIONS, BY STATES—Continued.

Strikes.

State.	Building trades—Concluded.						Carriage, automobile, and wagon workers.	Chemical workers.	Clerks (retail).		Coopers.		Electrical and gas supply workers.	
	Sheet-metal workers.	Structural-iron workers.	General and miscellaneous.											
1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	
Alabama.....	1							1		1				
Alaska.....					1									
Arkansas.....						4		4				1		
California.....	3				1	1			1	2				
Colorado.....					3	1		1					1	
Connecticut.....	1				2									
Delaware.....		1												
District of Columbia.....						2								
Florida.....	1	1			1			1	1		1			
Georgia.....					1									1
Idaho.....	5	3	3		3	3	1	1	3	2	4	10	1	2
Illinois.....	1				1	3			2					3
Indiana.....	2				2	1								1
Iowa.....					1	2	1	1	2	1	1	1		
Kansas.....					1						2			
Kentucky.....	1				2			1						1
Louisiana.....			1	2						1				
Maine.....					1	1								
Maryland.....		1	2		4	6	1	3		2	5		7	2
Massachusetts.....					3	2	2	6		1	3	1		
Michigan.....					1	2		2		2			1	
Minnesota.....							1							
Mississippi.....					2	1	4	1	4	2	5	2		1
Missouri.....	1				2	1				1				
Montana.....					2						1			
Nebraska.....											1			
New Hampshire.....	1	1		1	3	3		1	3	6		2	1	
New Jersey.....	14	3	8		4	9	1	6	2	8	9	17	3	1
New York.....	1										1			
North Carolina.....	1	2	3	1	3	6	1	5			2	2	1	5
Ohio.....	1				2	1					1	1		
Oklahoma.....														
Oregon.....	1				2	2		1	1	3	1			
Pennsylvania.....		3	1	1	2	9	1	1	1	3	1		1	
Porto Rico.....									3	1				1
Rhode Island.....														1
South Carolina.....	1				1	1		1	1	1				1
Tennessee.....	4	1		1	1				3	2				
Texas.....		1				4								
Utah.....	1					1								
Virginia.....	1													
Washington.....					1	2								1
West Virginia.....	1		1	1		1							1	
Wisconsin.....	2					3		1						
Total.....	45	17	19	12	44	73	13	31	29	33	34	46	8	11

Lockouts.

California.....								1		1				
Illinois.....														
Indiana.....				1	1	1								
Louisiana.....					1	1								
Missouri.....					1									
Montana.....														
New Jersey.....					1	1								
New York.....					1	1								
Ohio.....						1								
Texas.....						1								
Virginia.....						1								
West Virginia.....						1		1						
Wisconsin.....														
Total.....				1	4	8		2		1				

TABLE 12.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1918 AND 1919, IN SPECIFIED OCCUPATIONS, BY STATES—Continued.

Strikes.

State.	Clothing industries.																	
	Boot and shoe work-ers.		Fur work-ers and hat and cap mak-ers.		Mitt-ners.		Shirt mak-ers.		Cloak, waist, and skirt mak-ers.		Ladies' cloth-ing mak-ers.		Men's cloth-ing mak-ers.		Tailors.		Miscel-laneous.	
	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
Arizona.....																	1	
California.....				1					1				1	1	1	1	5	
Colorado.....																	1	
Connecticut.....	2		2	4						5	1	3	2	2		4		2
District of Columbia.....															1	2		
Florida.....																2		
Georgia.....																2		
Idaho.....															3	2		
Illinois.....		1	3	1		1			1	4		1	7	5	5	5		1
Indiana.....															1		1	
Iowa.....				1														1
Kentucky.....																		
Maine.....	3	4												1		1		
Maryland.....		1					1	1	2			1	4	2		1		
Massachusetts.....	34	22				1			2	5		5	9	3	7	9		4
Michigan.....				1				1							1	1		
Minnesota.....			2			1	1							1	1	1		
Missouri.....				1			1	1					4	2	1	3		
Nebraska.....															1	1		
New Hampshire.....	1	2																
New Jersey.....		1	6	3		1	1	1		2		2	4	2	4	2	1	1
New York.....	7	14	18	13	2	7	10	1	129	20	16	12	50	12	14	6	5	13
Ohio.....				3					3	2		2	3	3	6	5	1	1
Oklahoma.....																		1
Oregon.....																	1	
Pennsylvania.....		1	2	4	2		2	3	1				14	5	2	2	1	
Rhode Island.....																2		
South Carolina.....																1		
Texas.....													1					
Utah.....															1			
Vermont.....														1				
Virginia.....	1											1					2	
Washington.....		2													1		2	
Wisconsin.....		1	1													2		
Total.....	48	49	34	36	4	11	16	8	139	38	17	23	99	40	48	66	11	25

Lockouts.

State.	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
District of Columbia.....																1		
Georgia.....																1		1
Illinois.....	1																1	
Indiana.....													1					
Massachusetts.....		2											1					
New York.....	1									1			5		1		1	
Pennsylvania.....							1						1				3	
Tennessee.....		1																
Total.....	2	3					1		1	1		8		1	2		6	

TABLE 12.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1918 AND 1919, IN SPECIFIED OCCUPATIONS, BY STATES—Continued.

Strikes.														
State.	Freight handling and teaming.						Furniture industry.							
	Freight handlers.		Long-shoremen.		Teamsters.		Cabinet-makers and carvers.		Upholsterers.		Musical instruments.		Occupation not specified.	
	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
Alabama.....			1											1
Arizona.....				4	2	2				3				1
California.....	1			1										
Canal Zone.....					2									
Colorado.....			1		1	1					1			1
Connecticut.....	2		2	1										
Florida.....			1	1	1	1								
Georgia.....		1	1	1	1	1								
Illinois.....					22	9	1	2		3		4	2	1
Indiana.....					3								1	
Iowa.....					3	4					2			1
Kansas.....					4	1				1			1	
Kentucky.....					1	1								
Louisiana.....			2	3										
Maine.....	1													
Maryland.....			2											
Massachusetts.....	6	2	3	5	12	17			1					2
Michigan.....	1				1	5								
Minnesota.....			2	3	4	2	1	1						1
Missouri.....					4	2	4				1			1
Montana.....					5									
Nebraska.....					2	1								
New Hampshire.....			1	2	4	3								
New Jersey.....	1		7	4	28	17	4		2			1	1	3
New York.....	8	2			2	7						4	3	4
Ohio.....	2			1	7	4	2							
Oklahoma.....					1									
Oregon.....	1		2	1		1								
Pennsylvania.....	1		1	3	6	1	1		1					1
Porto Rico.....			1											
Rhode Island.....					1		1							
Tennessee.....					1	1	1							1
Texas.....				2										
Utah.....						1								
Virginia.....			1	2	3									
Washington.....			3	3	9	4			1				1	
West Virginia.....					2									
Wisconsin.....			1	3	3	3								
Interstate.....						1								
Total.....	24	5	30	37	129	88	14	3	2	10		13	9	18

Lockouts.

State.	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
California.....				1					1					
Illinois.....														
New York.....														1
North Carolina.....					1									
Ohio.....														
Pennsylvania.....														2
Tennessee.....					1									
Texas.....														
Total.....				1	2				1					3

TABLE 12.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1918 AND 1919, IN SPECIFIED OCCUPATIONS, BY STATES—Continued.

Strikes.

State.	Fire-fighters.		Fisher-men.		Food hand-lers.		Glass-workers.		Hard-ware workers.		Iron and steel workers.		Jewelry workers.		Laun-dry workers.	
	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
Alabama.....	1														1	----
Arizona.....															1	----
Arkansas.....															1	----
California.....			1		11	5	1		1		8				1	1
Colorado.....															1	1
Connecticut.....	1								3	1	3	2	1	1		
Delaware.....											2					
District of Columbia.....																
Florida.....		1		1												1
Georgia.....								2								
Illinois.....	2	1			3				1	4	6	9		1	1	
Indiana.....	1				1	1	1				1	1				
Iowa.....					1				1	1		2				1
Kansas.....					1	1										1
Kentucky.....														1	1	
Louisiana.....						3					1	2				
Maine.....			2		2											
Massachusetts.....			3	2	2		3		1		2	6	4	3		5
Michigan.....	2	1				1			1							
Minnesota.....									1		1					
Missouri.....					1				1		4				1	
Montana.....					1				1						1	
New Jersey.....								1	3	7	3	2	3	7	5	2
New York.....			2	1	4			1	5	7	6	3	7	5		4
Ohio.....	1	3	1	1			2	4		2	7	11		2		1
Oklahoma.....		2														
Oregon.....			1		2										1	1
Pennsylvania.....	1		1	1	1	3		5	1	12	16		1		1	1
Porto Rico.....																
Rhode Island.....							1				2					1
Tennessee.....											1					1
Texas.....	1				1						1					3
Utah.....					1											
Vermont.....		1														
Washington.....		1			3	1				6		1				1
West Virginia.....							1	1		4	2					
Wisconsin.....										1	2					
Interstate.....											1					
Total.....	10	10	1	12	30	23	13	8	15	17	72	67	11	22	14	26

Lockouts.

Colorado.....	1															
Illinois.....											2					
Indiana.....																
New Jersey.....									1							
New York.....											1					
Ohio.....												1				
Pennsylvania.....											2	4				
Tennessee.....																1
Texas.....					1											
Total.....	1				1				1	2	8	1				1

TABLE 12.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1918 AND 1919, IN SPECIFIED OCCUPATIONS, BY STATES—Continued.

Strikes.

State.	Ship-builders.		Stationary engineers and firemen.		Steam-boat men.		Stone-workers.		Street and sewer employees.		Street railway employees.		Telegraph and telephone employees.		Tobacco workers.	
	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
Alabama	1	2							2	1						
Arkansas													1			
California	10	12	1		1	3					3		3			2
Colorado				1							1		1		1	
Connecticut	3	2							1	2	4	1	1		1	5
Delaware	3	1							1		1					
District of Columbia									2						1	
Florida	2	3									3				2	
Georgia	3	3		1		1					4	2		2	7	4
Illinois	1	1	1	1	1				1	2	12		4	5	6	4
Indiana											1	2	1	6		2
Iowa											3	6	1			
Kansas			1								3	1	1			
Kentucky										1	1	1			3	
Louisiana	2	1			1	3				2	1			1		
Maine	7	3	1							1				1		
Maryland	15	4	1		2	1			6		2			1		1
Massachusetts	6	4	9	6		2	5	3	10	12	6	12		2	1	1
Michigan	2	3			1		1				3	4	2	1	1	
Minnesota	1		1	1	1	1					1		1			
Mississippi	1	1														
Missouri		1	1													
Montana									1	2			9	1	4	1
Nebraska											2		2		1	2
New Hampshire			3											1		
New Jersey	9	11	1	2	1		2	1	2	1	1				1	
New Mexico										1	3	2				8
New York	13	9	2	2	10	13	1		5	3	13	14	4	3	13	6
North Carolina		2		1			1								1	
North Dakota																
Ohio	1	2	4	1	1		1	2			13	14	1	4	6	3
Oklahoma											7		1	2		
Oregon	3	4				1		1								
Pennsylvania	24	14	2		2	4	1	1	2		7	10	2	4	3	10
Porto Rico											1					
Rhode Island	2					1			2	1		1			1	
South Dakota																
Tennessee			1				1	1			3	2	1		1	1
Texas	3								1		3	2	2			
Utah											1					
Vermont							2									
Virginia	5	2			1	1					1		1	1	2	
Washington	14	13							2		1		1	2		
West Virginia					1		1		1		1	3			2	
Wisconsin	4				1	2					2	1				2
Wyoming											1					
Interstate	1	3			2							2	1	3		
Total	136	101	26	19	22	36	14	13	39	32	117	105	33	53	47	54

Lockouts.

State.	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
California													1			
Colorado													1			1
Florida	1												1			
Georgia															1	
Illinois																
Kentucky																
Massachusetts			1												1	
Michigan	1															
Mississippi	1															
Missouri																1
New Jersey		1														
Ohio													1			
Oklahoma												1				
Oregon														1		
Washington													1			
West Virginia					1											
Total	3	1		1		1						1	6	1	2	2

TABLE 12.—NUMBER OF STRIKES AND LOCKOUTS BEGINNING IN 1918 AND 1919, IN SPECIFIED OCCUPATIONS, BY STATES.—Concluded.

Strikes.

State.	Textile industry.										Waiters, cooks, bar-tenders, and hotel employees.		Miscellaneous workers.		Occupations not reported.	
	Cotton and woolen workers.		Dyers.		Hosiery and knit-goods workers.		Silk workers.		Miscellaneous and not specified.		1918	1919	1918	1919	1918	1919
	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919						
Alabama.....														1		
California.....	1			1										2	4	3
Colorado.....														3		
Connecticut.....	7	12	1		3	2		1	3	4	2	1	6	2		
Delaware.....											1		2			
District of Columbia.....											1	2			1	
Florida.....													1		2	
Georgia.....	4												1	1		
Hawaii.....													2			
Idaho.....													3			
Illinois.....		2		1				1		10		3	18	16		
Indiana.....								1					4	1		
Iowa.....													4			
Kansas.....											1		2			
Kentucky.....		1			1						1					
Louisiana.....													3	3		
Maine.....	4	3		1			1	1		2	1	1	5	2		
Maryland.....	2										2	6	18	10		2
Massachusetts.....	48	56	6	3	1	2	3	5	15	9	6	2	1	2	1	2
Michigan.....			1		2						1	2	5	2	2	
Minnesota.....											1	1	6	1		
Missouri.....			2								1	1	2			
Montana.....											1	1	2			
Nebraska.....											1		1			
New Hampshire.....	4	9				1				1			2			
New Jersey.....	5	3	2	5			15	10		5	3		8	5		1
New York.....	5	10	1	3	14	13	8	4	4	4	30	15	22	29	4	2
North Carolina.....																
Ohio.....											4	3	5	6	1	2
Oklahoma.....											2		1	3		
Oregon.....		1											1	5		
Pennsylvania.....	7	2	2	1	3	1	5	12	1	7	4	3	8	5	1	3
Rhode Island.....	3	17	3	1			4	3	16	13	1	1	1	1		2
South Carolina.....	1	2														
Tennessee.....													2	1		
Texas.....											3	2	2	2		1
Utah.....											1	1	1	1		
Vermont.....						1							2	1		
Virginia.....	1	1						1					3		2	
Washington.....				1							2	5	3			
West Virginia.....									1		6	4	2	2	4	
Wisconsin.....													1			
Wyoming.....													1			
Interstate.....													1			
Total.....	92	132	18	17	24	22	36	33	39	47	73	60	154	112	22	14

Lockouts.

State.	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919	1918	1919
Arizona.....										1	1					
Georgia.....	2	1								1			3	2		
Illinois.....											1		2			
Indiana.....												1				
Massachusetts.....	1									1		1				
New Hampshire.....		1														
New Jersey.....				1									2			
New York.....																
Oklahoma.....														1	1	
Oregon.....																
Pennsylvania.....										1						
Tennessee.....										2						
Wisconsin.....										1						
Total.....	3	2		1						6	2	1	7	3	1	

CURRENT NOTES OF INTEREST TO LABOR.

Efficiency of Labor Increasing.

The question of the present efficiency of labor was the subject of a recent investigation by the research department of the National Association of Credit Men, and the results of the answers to a questionnaire which was sent to a list of representative manufacturers were summarized in the May issue of the Credit Monthly. The questionnaire covered the following points: (1) The efficiency of labor in March, 1920, as compared with December, 1919; (2) present efficiency as compared with so-called normal times (1913-14); (3) reasons for reduced efficiency when present conditions are unsatisfactory; (4) the reasons for the increase in efficiency if present conditions show improvement.

Replies were received from 169 manufacturers located in all sections of the country, and an analysis of the answers led the author, Dr. Whyte, to conclude first that there is a good deal of exaggeration in the often repeated statement that labor in this country is only 50 or 60 per cent as efficient as it was before the war, and, second, that the year 1920 is so far showing an increase in efficiency.

In reply to the question, "Is your labor more efficient now than it was three months ago?" 57, or 34 per cent, of the 167 firms replying reported an increase in efficiency; 72, or 43 per cent, reported no improvement; and 10, or 6 per cent, reported a decrease in efficiency, while 18 companies thought that, although there was no improvement shown, labor was as efficient as in prewar times, and 10 stated that old labor showed as much efficiency as in the prewar period but that new labor was inefficient. Since more than one-third of these firms believed that conditions in this respect had improved, as against 6 per cent who reported a reduction in efficiency, altogether an increase of production for the three-month period was shown.

On the other hand, the replies to the question comparing the present with the so-called normal period show that production is not yet up to the prewar standard. Seventy per cent of the 169 companies answering this question stated that they did not believe that labor is as efficient now as it was in 1913-14. Thirteen of these employers, however, attempted to make a percentage comparison which, when averaged, showed a relative efficiency at present of 73 per cent, and while the number reporting was too small to form a general estimate it was considered that it refutes in a measure the charge that the relative degree of efficiency reaches as low a point as 50 or 60 per cent. Twenty-seven, or 16 per cent, believed that labor is as efficient now as formerly, but only 3 per cent considered that efficiency has reached a standard beyond that of normal times.

The reasons assigned for lowered production show that a large number of employers attribute it to labor shortage. The causes

next in order of importance are given as industrial unrest, high rate of labor turnover, high wages, reaction from the war, and high cost of living, while in a few instances the blame was laid upon organized labor, the high wages paid by the Federal Government during the war, lack of interest, general extravagance, shorter hours, housing shortage, radical social agencies, and prohibition.

Causes for increased efficiency were attributed to profit sharing, bonuses, high wages, industrial welfare work, improved methods of management, abatement of industrial unrest, and education of employees along economic lines.

Apprenticeship in Wisconsin.

THE Industrial Commission of Wisconsin has as one of its functions the supervision of a system of apprenticeship. This is the only State in the Union in which such a system exists, or in fact in which apprenticeship receives real attention from the State. A brief report¹ by the commission sets forth the reasons for the attempt at standardization that has been entered upon by the State, with representative standards or schedules worked out for application to certain trades. Provision is made for a variety of establishments and equipment so as to avoid difficulties due to an unnecessary rigidity. The schedules presented relate to the metal trades, covering the occupations of machinist, automobile machinist, toolmaker, boiler maker, and metal pattern maker; the building trades, including bricklayers, plasterers, and plumbers; the allied printing trades, including compositors, and lithographic transferrers; unclassified trades, including shoemakers, bakers, custom tailors, milliners, jewelry engravers, jewelers, and barbers. Thirty questions and answers intended to explain and enforce the principles involved conclude the pamphlet. On the satisfactory completion of the apprenticeship the apprentice receives a diploma issued by the State under the seal of the industrial commission and countersigned by the employer. What constitutes a satisfactory completion of the apprenticeship is determined by the commission.

A Home-Building Experiment in Manchester, England.

IN THE April, 1920, issue of The Labor Gazette, issued by the Canadian department of labor, there is a brief account of a labor enterprise of an unusual character which has been inaugurated in Manchester, England.

The housing committee of the city corporation has agreed to the proposition of the building guild, a newly formed federation of building trades, to erect 1,000 houses in Irlam, a suburb of Manchester. The municipality is to provide the funds while the guild is to furnish

¹ Apprenticeship in Wisconsin. Third report. Industrial Commission of Wisconsin [Madison], 1919, 18 pp.

not only the manual labor but also the technical and administrative workers. The city is to pay the labor cost and 10 per cent additional, and is to receive the houses when they are built. The workers are to get full week's wages even though the work is delayed because of inclement weather. The extra 10 per cent is to cover (a) losses ensuing from the full-week system; (b) purchase of plant, such as scaffolding, etc.; (c) transportation cost. The city council is to buy the building material, as it was thought a public body could best handle this matter under present circumstances. In carrying on the work the guild will be represented by an executive committee which will include administrative and technical advisers. "The entire working force is to be subject to the direction and discipline of men in good union standing." Provision is made for full-week or "all-weather" employment by having "one staff for both inside and outside work." In fine weather all the workers are concentrated on outside jobs and in wet weather they are shifted to inside jobs. This method will result in having many houses at different stages of completion at one time and calls for a correspondingly large working capital, but Manchester stands ready to meet this difficulty. It is alleged that this guild scheme is an advantage to the worker because it insures him regular payment and gives him a sense of responsibility to the public.

Middle Classes Union of Great Britain.¹

AROUSED by the enormous weekly amounts that were being paid in out-of-work donations, appalled by the menace of strikes in mines and on railways, and in other essential industries, by increasing income taxation, and the rising cost of living, and feeling that existing and prospective housing legislation should also benefit the British middle classes, representatives of these classes held a crowded meeting on March 6, 1919, at Cannon Street Hotel, London, which resulted in the organization of the Middle Classes Union.

In addressing the assembly, the chairman is reported to have said:

If you are properly organized, you will be the greatest force in the nation. You can possibly hold up all the workers. You could hold up the capitalists or you could even hold up the Government. You must see you are not squeezed or crushed and that you are placed in such a position as will necessitate a fair and square deal in all things and the right to live.

Early in March, 1920, the union celebrated the first anniversary of its organization.

Notwithstanding the special difficulties besetting the organizing of the Middle Classes Union, because of the variety of political viewpoints and individual interests of its members, according to a report made to the press by Capt. Stanley Abbott, the secretary, that organization already has 140 branches in various parts of the country. Many branches have a membership of as many as 1,500. Sections of the union are to be found in London. The home counties, the south, the midlands, and Scotland also have their Middle Classes

¹ Compiled from data in London Times, Mar. 7, 1919; and Christian Science Monitor, Jan. 16, Feb. 9, Apr. 20, and May 6, 1920.

Unionists. The Brighton and Hove branch has become so large that it is being divided in two.

The policy of the union is summarized as follows:

1. The strongest measures against Bolshevism.
2. The prevention of industrial nationalization.
3. The suppression of profiteers in exploitation and sectional tyranny.
4. More equitable distribution of taxation.
5. Representation of the "middle interests" in all political and

economic affairs.

The "challenge which certain classes of labor offer to what the middle classes believe to be essentially right in the existing social order" brought about the formation of the union. The "continued existence of this challenge on the one hand, together with the aggressive policy of pure capitalism on the other," is the reason for the union's continued activity.

The Middle Classes Union does not consider itself a "strike breaker," but it is resolved to keep the whole community from being held up by any one part of the community. The union plans to aid in the carrying on of essential public services in emergencies and to ward off "lightning strikes."

Members of the Middle Classes Union are asked to back candidates who stand for the union's principles, regardless of such candidates' party affiliations. The union prepares lists of questions which are sent out to candidates for Parliament and members of the union are counseled to support candidates answering these questions satisfactorily. If all of the candidates do so, members may choose according to party lines.

The Middle Classes Union has appointed a taxation committee of experts who submitted evidence to the Royal Commission on Income Tax. The union is also represented upon the Board of Trade central profiteering committee, as well as other governmental committees.

Recent efforts have been made to organize the Association of Engineering and Shipbuilding Draftsmen, the Electrical Power Engineers Association, the Railway Clerks Association, the National Association of Colliery Managers, the Bank Officers Guild, the National Union of Journalists, the Actors Association, and the Association of Industrial Chemists into a federation of "black-coat" workers, "under the ægis of the Labor Party," which have been met by a countermovement to constitute these workers into a "third party" independent of manual workers and employers. If these black-coat organizations are not affiliated with the Middle Classes Union there is at least a likelihood that some of these associations will be represented on the grand council of that union. At any rate the trend of the black-coated workers toward "an alliance with labor" has received a check. However, this does not make it an easy task to forecast the future of the Middle Classes Union.

In connection with this brief account of the British Middle Classes Union, it is interesting to note that Hon. Edward James Gavegan, justice of the supreme court of New York, recently approved incorporation articles for "The Public Union (Inc.)," described as "a growing union of middle-class people," the aim of which is "to benefit in any way those who are not either organized manual laborers or high-salaried executives." Other aims of this new union that

are cited in the petition are "to help relieve class oppression; to protect the public by lawful means from industrial and commercial oppression; to regulate and classify all forms of voluntary service; to serve in emergency crisis and to secure representation of all middle interests in all legislative action."¹

Census of Home Workers in Switzerland.²

A RECENT census of home workers in Switzerland brought out the fact that 70,874 homes are carrying on home work and that the number of home workers is 92,136. The home industry in Switzerland represents 12.4 per cent of the total number of undertakings (571,498) and the home workers 5 per cent of the total number of workers (1,851,599).

The textile industry contains the largest proportion of homes and workers carrying on home work. Embroidery occupies the most hands (35,887) and is carried on chiefly in the canton of St. Gall, but also in Appenzell and Thurgau, and in the cantons of Zurich, Schwytz, Glarus, and Grisons. Silk weaving, which occupies 12,478 home workers, is carried on mostly in the cantons of Zurich, Schwytz, and Outer Rhoden. The manufacture of silk ribbons, which occupies 7,557 home workers, is confined almost exclusively to Basel firms; the workers are to be found in the cantons of Basel (city and country), Aargau, and Soleure. The watch industry occupies 12,071 home workers but is tending to become more confined to the factories. The straw plaiting industry, which occupies 6,095 home workers, is also tending to become a factory trade by reason of the complicated articles made on looms. The chief seat of the industry is in Aargau; the home workers extend to the cantons of Lucerne, Freiburg, Obwald, and Tessin.

A census taken in the winter would show a much larger number of home workers.

Unrest Among Agricultural Labor in Northern Italy.

An article on the agrarian crisis in northern Italy appeared in the *Gazette de Lausanne* (Mar. 7, 1920) and is summarized in the *Economic Review*³ as follows:

At the beginning of February the Federation of the Cooperative Societies of Agricultural Laborers in the Province of Ferrara addressed to the employers' association a memorial demanding certain economic concessions. The federation, as is its wont, accompanied the memorial with a threat to strike. As the federation is an extremely powerful organization, and as the strike would occur at a moment when the spring sowings are commencing, the situation is of a nature to preoccupy not only the land-owners but the entire nation.

The movement soon spread to the Provinces of Rovigo, Verona, Bologna, and Reggio, the large district below the Appenines and the Trentino Mountains. The demands of the workers' syndicates are as follows: The organization of agricultural laborers must be given the sole right to decide as to the distribution of work, as to the share of the produce of the soil to be given to the workers, and as to the arranging for the accommodation of laborers on the farms and even in the houses of the owners. The syndicates also demand a reduction of the working day to seven hours, and even

¹ Evening Star, Washington, Apr. 23, 1920.

² *Gazette de Lausanne*, Lausanne, Mar. 12, 1920.

³ Review of the Foreign Press. *Economic Review*, London, Mar. 24, 1920, p. 517.

to six hours for eight months of the year. The minimum wage for ordinary work is to be raised from 1.50 to 2.75 lire (29 to 53.1 cents, par) per hour. The time occupied by the laborers in proceeding to work and getting tools ready is to be counted as working time. According to the new wage schedules demanded the driver of a team of oxen would receive in money and in kind 6,000 lire (\$1,158, par) per year.

The strike in the Ferrara district was postponed for 10 days because many of the laborers disapproved of these exaggerated demands and were unwilling to obey the orders of the federation of syndicates. On the other hand, the strike commenced on the appointed day in the Rovigo district. The whole movement is but an episode in the struggle carried on for years by the federation, whose aim is to transfer the ownership of the land to the laborers.

It has usually happened in Italy that in districts where peasant proprietorships have been established the socialist campaign is powerless. In Mantua, for example, 25 years ago agrarian socialism was rampant. The land was split up into farms of 60 to 70 hectares (148 to 173 acres), each giving employment to numerous laborers. The landowners then decided to subdivide the farms into holdings of 5 and 6 hectares (12.4 and 14.8 acres), each cultivated by a single family. These holdings were then let to the most intelligent among the peasants. The result was that socialist agitation ceased entirely. A similar procedure is now to be adopted in the Ferrara district, and it is hoped that it may have a like result.

Resolutions of Conference of Employers and Employees of South Africa.¹

THE conference of employers and employees called by the Government of the Union of South Africa to meet at Pretoria, November 3-7, 1919, and again on December 8-11, and attended by delegates representing every class of employers, including mining, manufacturing, State, municipal, commercial, etc., and delegates representing various labor organizations and other associations of employees, adopted unanimously resolutions favoring—

(1) Recognition of employees' organizations by employers of labor; (2) the registration of voluntary industrial agreements entered into between representative bodies and employers and employees in any industry, and the application of the terms of such agreements to the whole of the persons engaged in that industry, either locally or throughout the Union as required; (3) the establishment of joint boards as the best means for regulation and constant exchange of views between employers and employees, and that the method of selection of representatives on the various joint boards, conferences, etc., representing both employers and employees, should (except in the case of employers' representatives in Government departments) be entirely in the hands of the unions or organizations concerned, where such exist, and should be free from Government direction or ratification, direct or indirect; (4) legislation establishing the principle of a minimum wage based on a minimum standard of living; (5) the principle of equal payment for equal work, irrespective of the sex of the person performing such work; (6) the provision of adequate and comfortable housing of the workers by the Government by means of a national housing scheme; (7) the principle of a half holiday on one afternoon per week in all trades, industries, and occupations where such is feasible; (8) legislation to limit profits on the necessities of life; (9) an act for the regulation of apprenticeship.

Other resolutions adopted, but not unanimously, relate to nationalization of industries; a 48-hour week as a maximum for any industry, with a 44-hour week wherever practicable, and 40-hour week for workers in underground or hazardous occupations; the application of minimum-wage legislation on national lines; the abolition of systematic overtime in any industry; and the adoption of legislation providing a complete scheme of registration for all unemployed persons.

¹ Data taken from The Labor Gazette Department of Labor, Ottawa, Canada, for March, 1920, pp. 314-315.

PUBLICATIONS RELATING TO LABOR.

Official—United States.

COLORADO.—*State inspector of coal mines. Seventh annual report, 1919. Denver, 1920. 78 pp.*

Tables devoted to mining accidents show 91 fatalities and 1,283 injuries, 1 being permanent total, 25 permanent partial, and 1,257 temporary disabilities. Of the last, 682 caused a time loss of more than 14 days.

ILLINOIS.—*Industrial Commission. Annual report for fiscal year ending June 30, 1919, and statistical report for calendar years 1918 and 1917. Springfield, 1920. 49 pp.*

A brief review of this report appears on pages 175 and 176 of this issue of the REVIEW.

KENTUCKY.—*Department of Agriculture, Labor and Statistics. Bureau of Labor. Ninth biennial report, and report of Bureau of Immigration, 1918-19. Frankfort [1920]. 225 pp.*

In this report the commissioner of agriculture, labor and statistics recommends that the labor bureau be made a separate department headed by a commissioner of labor who shall be elected at the same time and in the same manner as the heads of other State departments. Provision for a woman's division in the department is also recommended. It is urged that the legal period of employment for women be reduced to eight hours per day, that one day's rest in seven be made compulsory, that the minimum period allotted for meals be three-quarters of an hour, that a rest period of 10 minutes be demanded for the middle of each working period without thereby increasing the length of the working day, that no woman be employed between the hours of 10 p. m. and 6 a. m., and that equal pay for equal work be demanded in behalf of woman workers.

The report of the bureau of immigration and state free employment states that between December 1, 1917, and November 30, 1919, there were 2,223 applications for employment by males and 750 by females. During the period 1,852 males and 534 females were placed in position.

— *Workmen's Compensation Board. Annual report, June 30, 1918, to June 30, 1919. [Frankfort, 1919.] 82 pp.*

A digest of this report appears on pages 176 and 177 of this issue of the REVIEW.

LOUISIANA.—*Department of Labor and Industrial Statistics. Tenth biennial report, 1919-1920. New Orleans, 1920. 208 pp.*

MASSACHUSETTS.—*Bureau of Statistics. Thirty-third annual report on the statistics of manufactures for the year 1918. Boston, 1920. 133 pp. Public document No. 36.*

This report covers returns from 9,695 establishments and states that "manufacturing operations in 1918 quite generally reflected the extraordinary conditions which had characterized the preceding 12 months of 1917 and registered results surpassing all records." The average number of wage earners employed was 719,210, as against 708,421 in 1917. Whereas in 1917, 495,831, or 70 per cent of the total, were men, in 1918 the number fell to 489,237, a loss of 1.3 per cent. This decline was offset by an increase of 8.2 per cent in the number of women wage earners, the total rising from 212,590 in 1917 to 229,973 in 1918. The total amount paid to labor during the year was \$679,401,273, as compared with \$537,144,629 in 1917, an increase of \$142,256,644, or 26.5 per cent. The average yearly earnings for all wage earners, without distinction as to age, sex, or skill, rose to \$944.65 per capita, as compared with \$758.23 in 1917 and \$569.43 in 1913.

MASSACHUSETTS.—*Department of Labor and Industries. Division of statistics. Forty-eighth quarterly report on employment in Massachusetts, quarter ending December 31, 1919. Boston, 1920. 26 pp.*

The outstanding feature of the labor market during the final quarter of 1919 is stated to have been the continued undersupply of skilled workers in practically all of the principal trades, with an additional shortage of unskilled operatives in certain industries. The total number of strikes reported for this quarter was 78, as compared with 188 for the preceding quarter. Approximately 52,000 wage earners were involved. The estimated cost of new buildings and alterations for which permits were granted in 36 cities making reports to the department during the quarter was \$26,606,-195, as compared with \$27,746,966 for the third quarter, or a decrease of 4.1 per cent. Activity in the boot and shoe industry, the textile industry, iron and steel manufacturing, and printing and publishing was above normal; in steam and electric transportation practically normal; and in paper products "intense." Returns from 1,244 organizations, representing an aggregate of 273,673 members, show that at the close of December, 1919, 16,438, or 6 per cent of the total number of members, were unemployed for all causes. The corresponding percentage for the close of the preceding quarter was 5.4, but it was higher for the close of December in each year of the past decade, except 1916. The three State employment offices report 37,615 positions filled during the year, as compared with 39,735 for 1918, or a decrease of 5.3 per cent. The number filled by females decreased by 387, or 2.1 per cent, while that filled by males decreased by 1,733, or 8.1 per cent.

—*State Board of Labor and Industries. Sixth annual report, 1918. Boston, January, 1919. 65 pp. Public document No. 104.*

The report of the board on inspection work shows that the total number of orders issued for the year was 12,283, of which 5,785 referred to labor, 4,467 to industrial health, and 2,031 to industrial safety. There were 2,216 complaints made to the department during the year, divided as follows: Overtime employment, 353; nonpayment of wages, 1,202; violation of eight-hour law on public works, 13; health and sanitation, 270; advertising for help without stating "strike on," 31; one day of rest in seven, 26; preference of citizens, 14; prevailing rate of wage, 3; no time notice posted, 17; employing minors without certificate, 45; employing minors under 14, 61; labor, general (including intimidation of employees, fines, employment on legal holidays, etc.), 91; miscellaneous, 90. During the year the department issued 2,031 orders for industrial safety in manufacturing and mechanical establishments, and investigated 1,548 typical injuries occurring to workmen engaged in different industries in the State. The report on the administration of the weekly payment law states that 1,202 complaints were filed during the year.

The final report of the War Emergency Commission, created shortly after the declaration of war by the United States, is included in this volume.

NEW JERSEY (Newark).—*Evening technical courses of the Newark technical school. Annual bulletin, 1920-1921. Newark [1920.] 45 pp.*

A detailed outline of the technical, trade, and preparatory courses offered by the Newark Technical School to night students for the school year, 1920-21.

OHIO.—*Industrial Commission. Union scale of wages and hours of labor in Ohio on May 15, 1919. Columbus, December 17, 1919. 35 pp. Department of Investigation and Statistics, Report No. 38.*

This pamphlet gives the union scale of wages and hours of labor of street car employees and teamsters and chauffeurs, and of various occupations in the bakery, building, metal, and printing trades. The regular rates per hour, the overtime rates, and the Sunday and holiday rates are given; also the hours of labor per full day and per week, and in most instances, the hours of labor per short day and the number of months in the year in which the half holiday is in effect.

OREGON.—*Industrial Accident Commission. Third report showing the cumulative experience for the three-year period ending June 30, 1918. Workmen's compensation law. Salem, 1920. 81 pp.*

A summary of this report is given on pages 178 and 179 of this issue of the REVIEW.

PENNSYLVANIA.—*Department of Labor and Industry. Third annual report, 1916. Part 2. Harrisburg, 1918. 1176 pp.*

— — — *Industrial board. Bulletin of Information. Nos. 1, 2, 4, 5, 7, 8, 9, Nov. 3, 1919–May 15, 1920. Mimeographed.*

The initial copy of this bulletin states that its purpose is to keep the members of the department informed of the work of the industrial board and to invite cooperation in the interests of the entire department.

PORTO RICO.—*Department of Agriculture and Labor. Report, 1919. Washington, 1919. From the report of the Governor of Porto Rico, 1919, pages 685–718, inclusive.*

TENNESSEE.—*Bureau of Workshop and Factory Inspection. Seventh annual report, 1919. Nashville, 1920. 73 pp.*

Material changes made by the general assembly in the labor department—formerly known as the State factory inspection department—include the making of the department a subsidiary bureau of the State mining department, the chief mine inspector being given general control and direction of the new bureau of workshop and factory inspection, and the giving to the bureau, by enactment of the workmen's compensation law, the handling of accident reports, and the adjustment of compensation claims and settlements. This report includes a directory of industries inspected, with the number of employees; and sections on woman labor in Tennessee, Regulation of child labor, Industrial accident reporting, and workmen's compensation law.

WASHINGTON.—*Industrial Insurance and Medical Aid Department. Eighth annual report for the 12 months ending September 30, 1919. The Workmen's compensation act. Olympia, 1920. 95 pp.*

A brief review of this report appears on pages 179 to 181 of this issue of the REVIEW.

WISCONSIN.—*Industrial Commission. Apprenticeship in Wisconsin. Third report. [Madison] 1919. 18 pp.*

A brief summary of this report is given on page 220 of this number of the REVIEW.

WYOMING.—*Coal Mine Inspector. Annual report, 1919. Cheyenne, 1920. 71 pp.*

Twenty-five fatal and 146 nonfatal accidents were reported in district No. 1, as compared with 30 fatal and 190 nonfatal accidents for the previous year. As 4,902 men were employed in and around the mines, the ratio of fatal accidents per 1,000 men employed was 5.1 and of nonfatal accidents 29.78. The number of fatal accidents reported by district No. 2 for 15 months ending December, 1919, was 17 and of nonfatal 44.

— — — *Workmen's Compensation Department. Fourth report, 1919. Laramie, 1920. 165 pp. Employer's number.*

This report is noted on pages 181 and 182 of this issue of the REVIEW.

UNITED STATES.—*Department of the Interior. Bureau of Mines. Metal-mine accidents in the United States during the calendar year 1918. Washington, 1920. 113 pp. Technical paper 252.*

A brief review of this report appears on pages 164 and 165 of this issue of the REVIEW.

— — — *Federal Board for Vocational Education. Employment management. Washington, January, 1920. 34 pp. Employment management series No. 1. Bulletin No. 50.*

The functions of an employment manager are defined in the report as follows: Hiring shop employees and sometimes office employees as well; taking charge of transfers and discharges; assisting in determining rates of pay; supervising working

conditions; adjusting grievances; and studying the causes of labor turnover and methods of reducing it. The relative weights of the five principal qualifications necessary in the successful employment manager are: Personality, 35 per cent; general industrial experience, 25 per cent; executive experience, 20 per cent; shop experience (for employment managers in manufacturing establishments), 15 per cent; experience with organized social movements, 5 per cent.

While the employment manager idea spread rapidly during the war, it has been estimated that only about 10 per cent of the factories which are large enough to support central employment departments have started them.

UNITED STATES—*Federal Board for Vocational Education. The labor audit, a method of industrial investigation.* Washington, January, 1920. 48 pp. *Employment management series No. 8. Bulletin No. 43.*

The subjects covered in the labor audit are grouped under three general heads: The employment organization, which comprises working conditions, turnover, job analysis, methods of selection and of starting work, and training; the outside economic and industrial forces not under the control of the management but with which it has to deal; and the wages and total earnings, which include the form and efficiency of management, the amounts and methods of pay, and various welfare provisions.

The labor audit is useful to the management as a method of standard record and analysis and as an aid in solving the particular industrial problems of the plant; to the personnel manager because it affords the broadest view of the problem he has to meet and helps to formulate his policy; to the workers because it will, if fairly conducted, serve as a means for correcting the injustices from which they may suffer; and to the community because of the dissemination of knowledge, which in the event of labor disputes will enable the public to exert an influence according to the facts of the case. In general, it should result in a comprehensive and far-sighted program for bettering conditions and establishing a more just relationship.

— *The turnover of labor.* Washington, November, 1919. 60 pp. *Employment Management Series No. 6. Bulletin No. 46.*

A study of the relative extent of turnover among different classes of employees shows, as would be expected, that it is usually much greater among the unskilled workers than among the skilled or the clerical employees. It is stated that the proportion of turnover due to discharges is often much exaggerated and that a comparison of postwar with prewar figures for certain groups of establishments shows a reduction of almost one-half in this class of separations. This improvement is ascribed to two reasons: The great demand for labor during the war and the consequent reluctance to "fire" unnecessarily and the improvement in employment methods and establishment of centralized employment departments. A summary of measures which have been advocated as necessary for the maintenance of a stable working force is as follows: "(1) Good pay and steady work; (2) the careful selection and placement of help; (3) a well-organized employment department; (4) installation of some system for the hearing and adjustment of complaints."

— *The wage-setting process.* Washington, November, 1919. 32 pp. *Employment management series No. 5. Bulletin No. 44.*

In determining a wage in proportion to the task, consideration is given to the quantity and quality of the product, the amount of energy required or of fatigue produced, and to the nature of the working conditions. In order to fix standards it is necessary to analyze all these elements and upon determination of a standard process and of standard working conditions it is possible to fix a standard space or a proper work-and-rest schedule. To do this, time studies and fatigue studies must be made. The payment methods, which include the day rate, the ordinary piece rate, differential piece rates, and various bonus and premium plans, are discussed.

UNITED STATES.—*Federal Trade Commission. Food investigation. Report on private car lines, June 27, 1919. Washington, 1920. 271 pp.*

In three parts: Part I, General survey of private car lines; Part II, The packer car lines and their relations to the public; Part III, Nonpacker car lines.

——— *Report on the meat-packing industry. Part IV, June 30, 1919; Part VI, December, 1919. Washington, 1920. 390, 183 pp.*

Part IV considers The five larger packers in produce and grocery foods; Part VI, Cost of growing beef animals, Cost of fattening cattle, and Cost of marketing live stock.

——— *Report on the wholesale marketing of food. June 30, 1919. Washington, 1920. 268 pp. Maps.*

——— *Treasury Department. Bureau of War Risk Insurance. Compensation—medical and surgical treatment and supplies—artificial arms, legs, eyes—trusses—wheelchairs, etc., under the war risk insurance act as amended December 24, 1919. Washington, 1920. 12 pp. Important information for former soldiers, sailors, and marines, and their relatives and beneficiaries (also of interest to active service men).*

Official—Foreign Countries.

AUSTRALIA (NEW SOUTH WALES).—*Board of Trade. Declaration of the 23d December, 1919, as to the living wage to be paid to adult female employees. Sydney, 1920. 3 pp. Published in Government Gazette No. 2 of 2d January, 1920.*

——— *Department of Labor and Industry. Report with an historical review on the operations of the department during the year 1918. [Including the 22d series of annual reports of inspectors under the factories and shops act, 1912.] Sydney, 1920. 183 pp. Illustrated.*

Sections are devoted to the ministerial office, board of trade, special commissioner for conciliation, industrial registrar's office, office of chief inspector of factories and investigation officer, State labor exchanges and immigration branch, office of departmental engineer and chief inspector of scaffolding and lifts, and gas examiner's office. Figures covering the operation of the Workmen's Compensation Act, 1916, for the year 1918 show that there were 69 death cases in which compensation was payable under the act, as against 34 for the preceding year, and 65 in 1914; incapacity cases compensated by weekly payments increased by nearly 150 per cent, the number being 4,689 in 1917, and 11,504 in 1918. The total compensation paid increased from £52,358 (\$254,800.21, par) in 1917 to £117,384 (\$571,249.24, par) in 1918. Seventeen cases of industrial diseases due to employment were reported as follows: Lead poisoning, 10 cases; nystagmus, 5; cellulitis of arm, 1; phosphorus poisoning, 1. The total compensation paid in respect of these injuries was £367 (\$1,786, par).

CANADA.—*Department of Labor. Report for the fiscal year ending March 31, 1918. Ottawa, 1919. 47 pp. [No. 36, 1919.]*

——— (MANITOBA).—*Workmen's Compensation Board. Report for 1919. Winnipeg, 1920. 32 pp.*

A brief digest of this report appears on pages 182 and 183 of this issue of the REVIEW.

——— (ONTARIO).—*Bureau of Municipal Affairs. Report re housing for 1919 including reports of officials, statements as to operations of housing commissions, plans, etc. Toronto, 1920. 140 pp. Illus.*

Report of activities under the Ontario Housing Act, March 20, 1919, during the first year of its operations. Ninety-nine cities in Ontario have housing commissions, and 68 have commenced the building of houses under the scheme of Government loans for that purpose. Of the total Federal loan Ontario's share was \$8,753,291.93, and the Province agreed to add \$2,000,000. The total appropriated to municipalities is \$10,629,000. If all requirements of the municipalities are met for 1920 about \$8,000,000 will be necessary for housing loans. The number of houses erected by the cities is 1,184; the total loans made on them, \$3,677,974; and the average loan per house, \$3,106.40. Practically two-thirds of the houses for which loans have been made have six rooms.

CANADA (ONTARIO).—*Bureau of Municipal Affairs. Housing Committee. Report on the treatment of the surroundings of the small home; including (1) the subdivision of land for industrial housing and (2) the layout of the individual lot. Toronto, 1919. 85 pp.*

— (QUEBEC).—*Bureau of Statistics. Statistical year book. 6th year. Quebec, 1919. xvii, 666 pp.*

Part 6 of this report is devoted to organized labor, giving a brief summary of the provisions and operation of the Quebec Trades Disputes Act, and summaries of the Workmen's Dwellings Act and the Minimum Wage Act. Other labor legislation is cited. A tabulation shows a total of 366 trades unions with a membership of 48,570 in 1918, or an increase of 73.4 per cent over 1917. There are brief strike statistics, covering the years 1901 to 1918, inclusive. The report includes a statistical statement of the work of the provincial employment bureaus from 1911 to 1918; and also a table of accidents to workmen, classified by trade or industry and by nature of accident. There were 154 fatal accidents in 1918, the largest number, 37, being in steam railway services.

— [Department of Labor.] *Laws concerning the inspection of industrial establishments and public buildings. Edited by Gustave Francey under the direction and approval of the Department of Labor of the Province of Quebec. Quebec, 1920. 132 pp.*

The title of this booklet does not indicate its scope, which is said in the "Foreword" to be a "compilation of labor laws" which "could justly be named the labor code of the Province of Quebec." It includes also the conventions and recommendations adopted by the International Labor Conference, held at Washington, D. C., October-November, 1919. All matter is given in both French and English. There is an index, and a roster of the officers and principal employees of the department of public works and labor, department of factory inspection, public employment service, etc.

DENMARK.—*Statistiske departement. Statistisk Aarbog 1919 udgivet af det Statistiske departement. Copenhagen, 1920. 252, 4 pp.*

Statistical yearbook of the Kingdom of Denmark for the year 1919 containing among other material summary tables of statistics of retail prices, workmen's compensation, sick benefit funds, unemployment relief funds, amount of unemployment, wages, hours of labor, wages of agricultural workers and domestic servants, apprentices, cooperation, and cost of living.

GREAT BRITAIN.—*Board of Trade. Industrial Life Assurance Committee. Minutes of evidence. London, 1920. 278 pp. Cmd. 618.*

— [Home Office.] *Committee on the use of lead in painting of coaches, etc. Report of the departmental committee appointed to investigate the danger attendant on the use of lead compounds in the painting, enameling, and varnishing of coaches and carriages. London, 1920. 43 pp. Cmd. 630.*

This report forms Volume II of a series of four reports, Volume III of which is listed below. It contains a summary of the evidence given, including testimony concerning experience with leadless materials, and an analysis of the evidence covering the extent of lead poisoning, principal sources of danger, and methods of dealing with lead poisoning.

— [Committees on the use of lead in painting.] *Reports of the departmental committees appointed to investigate the danger attendant on the use of paints containing lead in the painting of buildings and in the use of lead compounds in the painting, enameling, and varnishing of coaches and carriages. London, 1920. Cmd. 631.*

This report forms Volume III of a series of reports, Volume I of which, on the use of lead in the painting of buildings, was published in 1915, Volume II, listed immediately above, and Volume IV, containing the minutes of the evidence taken by both committees, not yet received. The appendixes give statistical tables, regulations of several countries in regard to the use of lead, and method of making tests and results

of these various experiments to determine the relative danger of different kinds of exposure.

GREAT BRITAIN.—*Laws, statutes, etc. Coal Mine (Emergency) Act, 1920.* London, 1920. 13 pp. [10 Geo. 5, ch. 4.]

— — — *Manuals of emergency legislation. Food-supply manual revised to November 30, 1919, comprising the food controller's powers and orders and certain consequential orders of other departments.* London, 1920. 549 pp.

— *Ministry of Labor. Report on profit sharing and co-partnership in the United Kingdom.* London, 1920. 244 pp. *Bibliography.*

A brief summary of this report appears on pages 144 and 145 of this issue of the REVIEW.

— — — *National trade advisory committee. Reports upon openings in industry suitable for disabled sailors and soldiers. No. 5 (Revised).—The furniture trade. No. 8 (Revised).—The gold, silver, and allied trades. No. 25 (Revised).—The musical instruments trade. No. 27 (Revised).—The glass trades.* London, March, 1920. 19, 13, 19, 14 pp.

— *National Health Insurance joint committee. Medical Research Committee. An investigation into the epidemiology of phthisis in Great Britain and Ireland.* London, 1920. 98 pp. *Special report series, No. 46.*

— *Registrar of Friendly Societies. Reports for the year ending 31st December, 1917. Part C.—Trade Unions.* London, 1920. 43 pp.

This report, which relates to registered trade-unions only, states that during 1917 the membership of employees' unions reached 4,306,279, an increase of 19 per cent over 1916. The largest increases in total membership were in the general and engineering groups, which increases were over 210,000 and 140,000, respectively, while the greatest proportional increase was in the agricultural group, where the membership rose from 22,197 at the end of 1916 to 36,994 at the end of 1917. Female membership increased from 120,191 in 1914 to 447,401 in 1917. The income during the year was £5,807,776 (\$28,263,542, par), of which 83.2 per cent was contributed by members. During the year £1,703,241 (\$3,288,822, par) was expended on benefits to members, including unemployment, dispute, sick and accident, and superannuation.

PEACE CONFERENCE.—*Supreme Council. Declaration on the economic conditions of the world.* London, His Majesty's stationery office, 1920. 8 pp. *Cmd. 646.*

Unofficial.

AMERICAN FEDERATION OF LABOR. *Connecticut Branch. Official proceedings. Thirty-fourth annual convention, held in Meriden, Conn., June 2, 3, 4, 5, 1919.* New Haven, I. M. Ornburn, secretary, 1919. 34 pp.

ARNOT R. PAGE. *Further facts from the coal commission, being a history of the second stage of the coal industry evidence, with excerpts from the evidence. Compiled for the Miners' Federation of Great Britain, with a preface by Robert Smillie and Frank Hodges.* London, Labor Research Department [1920], 47 pp.

A former pamphlet by the same author entitled "Facts from the coal commission" was noted in the January, 1920, issue of the MONTHLY LABOR REVIEW, page 295; and articles containing accounts of the coal commission were published in the May and August, 1919, issues, pages 109 to 114 and 78 to 86, respectively.

BLOOMFIELD, DANIEL (COMPILER). *Problems of labor.* New York, The H. B. Wilson Co. 1920. 436 pp. *The handbook series.*

This book is a compilation of articles which have appeared in various publications on the following subjects: Causes of friction and unrest; Cost of living; Methods of compensation; Hours of work; Tenure of employment; Trade-unionism; Labor disputes; Limitation of output; Industrial insurance; Social insurance; Housing; Methods of promoting industrial peace; Occupational hygiene; and Women in industry. A short bibliography on each subject is included.

CARNEGIE, DAVID. *Can church and industry unite?* London, Marshall Brothers (Ltd.). 1920. 181 pp.

This book discusses the past relationship of the working classes and the church and the possibility of the two merging their aims and ideals into one forward movement. The general survey of the field and of the endeavors which have been made toward cooperation leads up to the author's plan for "one big union" of the church comprised of representatives and members of all organized Christianity, of employers and employed.

CHICAGO COUNCIL OF SOCIAL AGENCIES. *Committee on Relief. The Chicago standard budget for dependent families*, by Florence Nesbitt. Chicago, 168 North Michigan Avenue, April, 1919. 39 pp. Bulletin No. 5.

CONSUMERS' LEAGUE OF NEW YORK STATE AND CONSUMERS' LEAGUE OF THE CITY OF NEW YORK. *Women's wages to-day: One reason for a legal minimum in New York State*. New York, February, 1920. 12 pp.

DEUTSCHER BUND HEIMATSCHUTZ UND VEREINIGUNG FÜR DEUTSCHE SIEDLUNG UND WANDERUNG. *Die Wohnungs- und Siedlungsfrage nach dem Kriege. Unter Mitarbeit zahlreicher Fachmänner herausgegeben von Carl Johannes Fuchs*. Stuttgart, 1918. XI, 455 pp. Illustrated.

This volume, issued under the auspices of the German Federation for the Protection of the Home and the Association for German Settlement and Migration by Dr. Carl Johannes Fuchs with the collaboration of a number of German authorities on housing work, evolves a post bellum program for housing and settlement work in Germany. The introduction to the volume discusses the historical development of workmen's housing in Germany, Austria, and foreign countries, especially in England and Belgium, the housing density in London, Paris, Greater Berlin, and Vienna, and the relation of rent to income. The first part of the volume treats of methods and means of producing housing and the economic and architectural considerations governing it. The second part deals with the tasks of the future and proposed reforms of the present housing system.

FUNRISS, A. D. SANDERSON AND PHILLIPS, MARION. *The working woman's house*. London, The Swarthmore Press (Ltd.), 1920. 84 pp. Illustrated. Plans.

Chapters are on The views of the woman in the home, The inside of the house, Cooperative house management, The healthy town, and The new housing act and women's needs.

GAEBEL, KÄTHE AND VON SCHULZ, M. *Die Heimarbeit im Kriege*. Berlin, 1917. 210 pp. Bibliography.

This volume deals with homework in industries in Germany in general and with homework during the war in particular. It discusses the provisions of the Industrial Code relating to homeworkers, The German homeworkers' law, Social insurance of homeworkers, The protective laws for homeworkers of foreign countries (England, Austria, France, Norway, and the United States), Employment of homeworkers in the manufacture of military equipment (leather articles and clothing), The organizations of homeworkers (trade-unions and cooperative societies), The employment of war invalids in homeworking industries, Homeworking combined with agriculture, and The future prospects of German homeworking industries.

GASTON, HERBERT E. *The Nonpartisan League*. New York. Harcourt, Brace & Howe. 1920. 325 pp.

This book is a history of the foundation and growth of the National Nonpartisan League, written from the sympathetic viewpoint of one who has been active in the affairs of the league.

GRUNSKY, C. E. *A commodity unit to supplement money as a standard of value*. In *Transactions of the Commonwealth Club of California*. San Francisco. March, 1920, pp. 5-22.

The various plans and theories being advanced by economists and business men for stabilizing the money unit or insuring against the shrinkage in value of long-time

credits are of interest at this period of the rapid decline in the purchasing power of the dollar. A paper on "A commodity unit to supplement money as a standard of value" was read recently by Mr. C. E. Grunsky before the Commonwealth Club of California, in which he advocated the establishment of a standard which should be fixed, not upon a metal, but upon a definite quantity of necessities such as food, fuel, etc., which are essential for the ordinary comfort of the family. In determining the commodity unit, or "com" as the author calls it, it is suggested that the quantities of each of the 250 or more articles which the United States Department of Labor uses when it fixes the general commodity "index number" should be taken in the proportion of family consumption which would at the average wholesale prices during the 10 years, 1900 to 1909, have been purchasable, for example, for \$1,000. One "com" would then be one thousandth part of these various quantities. After fixing upon this standard all transactions would be made in "coms" instead of in dollars and the payment would be made in money according to the relation existing at the time of payment between the two. The principle may be shown by the following illustration: If a loan is made in terms of "coms" instead of in terms of gold, 1,000 "coms" might be equal to \$1,130 at the time the loan is made, but when the capital is returned it will still be 1,000 "coms" although in terms of money it may be equivalent to more or less than \$1,130 according to whether the value of the dollar has gone up or down.

This system, the author claims, would be of particular value in every transaction in which the element of time enters, as, for instance, salaries, wages, rents, investments, and loans, and it could be introduced into the business and industrial life of the country with practically no difficulty.

HASKELL, ALLAN C. *How to make and use graphic charts.* New York. Codex Book Co. (Inc.). 1919. 539 pp. *Bibliography.*

This is an exhaustive study of the theory and construction of the various kinds of charts and of the uses to which they may be put. It contains illustrations and typical examples which may be adapted to individual requirements, and gives valuable directions for the proper use of charts and methods for getting the best results.

HOFFMAN, FREDERICK L. *The mortality from respiratory diseases in the glass industry.* In *Journal of Industrial Hygiene*, Vol. II, No. 1. Boston, May, 1920. Pp. 1-5.

In view of the excessive mortality from pulmonary tuberculosis and possibly from nontuberculous respiratory diseases among certain occupations in the glass industry, and of the inadequate data so far collected in regard to the special hazards of the industry, the author advocates an extensive investigation similar to that being carried on among the granite workers of Vermont by the committee on dusty trades of the National Tuberculosis Association with the cooperation of various other agencies. He says "It is sincerely to be hoped that such an investigation will be made so that the facts may be known, and if conditions prove to be better than assumed, a further reduction in extra premium charges for life insurance may accrue to the benefit of wage-earners in the glass industry, and material restrictions may be removed in the case of occupations at the present time considered doubtful."

INDEPENDENT LABOR PARTY (GREAT BRITAIN). *Pamphlets. New Series, No. 1, International socialism and world peace. Resolutions of the Berne Conference, February, 1919; No. 3, The mine owners in the dock. Startling disclosures: A summary of the evidence given before the coal industry commission.* London, 8 and 9, Johnson's Court, Fleet Street EC. 4, 1919. 15, 16 pp.

JOSEPHSON, AKSEL, G. S. *Bibliographical notes on some books about reconstruction.* Chicago, 1919. 11 pp. Elbert H. Gary Library of Law, Northwestern University Law School, Bulletin No. 2.

LEGGE, THOMAS M. *Industrial diseases under the Workmen's Compensation Act.* In *Journal of Industrial Hygiene*. Vol. II, No. 1, Boston, May, 1920. Pp. 25-32.

Deals with the results of scheduling notifiable industrial diseases under the Workmen's Compensation Act of 1906, Great Britain.

LEGGE, THOMAS M. *Twenty years' experience of the notification of industrial diseases. In Journal of Industrial Hygiene, Vol. 1, No. 12. Boston, April, 1920. Pp. 590-596.*

Cutter lecture in preventive medicine and hygiene, delivered at the Harvard Medical School, December 8, 1919. Figures are given which "emphasize the value to be obtained from notification of clearly defined industrial diseases when sufficient time is given by a medical man to the elucidation of the subject."

LIBRARY BUREAU. *Filing as a profession for women. Boston, 1919. 49 pp.*

LITCHFIELD, PAUL W. *The Industrial Republic. Akron, Ohio. The Superior Printing Co. 1919. 73 pp.*

The author sketches briefly the causes leading up to the present industrial unrest, the reasons for the warfare between capital and labor, and the present status of the labor-capital opposition. A remedy for industrial troubles is found by the writer in the establishment of shop committee systems following the plan of Government of the United States, as he believes conditions within industries are analogous to those the same individuals have to meet as citizens of the Republic.

MASTERMAN, J. HOWARD B., EDITOR. *Clerical incomes. An inquiry into the cost of living among the parochial clergy, by 11 diocesan contributors. London, G. Bell & Sons (Ltd.), 1920. 307 pp.*

A volume of essays which aims to show how pressing is the problem of the poverty of the English clergy rather than to propound a solution of the problem. The last chapter, however, deals with Remedies for the poverty of the clergy.

MAXWELL, A. V., COMPILER. *New South Wales industrial arbitration acts and regulations, with amendments incorporated to August, 1918. With a complete index. Sydney, The Law Book Co. of Australasia (Ltd.), August, 1918. 113 pp.*

MORTON, D. S. *The 40 hours strike: An historic survey of the first general strike in Scotland. Clydebank (Scotland), Thos. Kane, 52 Second Avenue, [1919]. 16 pp.*

NATIONAL ASSOCIATION OF EMPLOYMENT MANAGERS. *Relationships and adjustments between employer and employed. Minutes of the second bimonthly conference, Chicago, December 13, 1919. Newark, N. J., C. Wolber Co. (Inc.), [1919.] 77 pp.*

NATIONAL CIVIC FEDERATION. *Social Insurance Department. Committee on Constructive Plan. A refutation of false statements in propaganda for compulsory health insurance. New York, Metropolitan Tower, October, 1919. 43 pp.*

NATIONAL COMMITTEE FOR CONSTRUCTIVE IMMIGRATION LEGISLATION. *A proposed act amending the immigration laws. New York, 105 East Twenty-second Street, April 25, 1920. 16 pp.*

The general character of the proposed changes are: (A) Rearrangement and grouping of existing provisions; (B) Providing for an immigration commission; (C) Limiting future immigration by annual determination by Secretary of Labor, on report of Commission as to "maximum number of aliens of each nationality" or "percentage of each ethnic group" on basis of (1) Record of previous assimilation of their immigrants into our citizenship; (2) Needs of our labor market, including domestic servants; (D) As thus limited, repealing discriminatory acts and those in contravention of United States treaties.

— *Proposed amendments to the naturalization laws. New York, 105 East Twenty-second Street, April 25, 1920. 2 pp.*

These proposed amendments embrace: (1) Raising the standards of naturalization; (2) Extending the privileges of naturalization to all who qualify; (3) Repealing existing laws inconsistent with these provisions.

NATIONAL CONSUMERS' LEAGUE. *Pamphlets. The eight-hour day and rest at night, by statute; Equal opportunity for women wage earners—facts vs. fiction; Standard minimum wage bill; Minimum wage commissions—current facts. New York, 44 East Twenty-third Street, 1920. 12, 10, 8, 15 pp.*

NATIONAL MARINE ENGINEERS' BENEFICIAL ASSOCIATION OF THE UNITED STATES OF AMERICA. *Journal of proceedings. Minutes of 45th annual convention, January 19-24, 1920. Buffalo, N. Y., George A. Grubb, secretary-treasurer, 356 Ellicott Building, 1920. 574 pp.*

NATIONAL SAFETY COUNCIL. *Safe practices. No. 29. Electrical equipment in industrial plants. Chicago, 168 North Michigan Avenue, [1920]. 16 pp. Illustrated.*

NATIONAL SAFETY COUNCIL. *Safe practices. No. 33. Hoisting apparatus. Chicago, 168, North Michigan Avenue, 1920. 14 pp. Illustrated.*

PETTIT, WALTER W. *Self-supporting students in certain New York City high schools. Studies in social work. New York, School of Social Work, 105 East Twenty-second Street, 1920. 87 pp.*

PHYSICIANS PROTECTIVE ASSOCIATION OF ERIE COUNTY (NEW YORK). *Compulsory health insurance and labor. How the interests of the workers would be affected by this legislation. Buffalo, 153 Delaware Avenue. [1920.] 16 pp.*

— *Notes on compulsory health insurance. Buffalo, 153 Delaware Avenue. [1920.] 22 pp.*

PROSSER, J. E. *Piece-rate, premium and bonus. London, Williams & Norgate, 1919. 122 pp.*

Discusses scientific management, profit sharing, and the various premium and bonus systems in use, including the Halsey, Rowan, Emerson, and Knoeppel systems. In appendix a comparison of wage systems is made, and the Lever Bros. (Ltd.) copartnership scheme and profit sharing in the United States are considered.

RAILROAD LABOR ORGANIZATIONS. *Report of proceedings in connection with 1919-20 wage movement. Statement by the chief executives, signatory hereto, to their respective constituencies, setting forth fully the progress of our negotiations since February 3, when we entered into a discussion of the wage question with the Director General of Railroads. Washington, National Publishing Co., Feb. 16, 1920. 20 pp.*

— *Supplementary report of proceedings in connection with 1919-20 wage movement covering period February 15 to March 4, 1920. Washington, National Publishing Co., 1920. 14 pp. Circular No. 3.*

RETAIL SHOE SALESMEN'S INSTITUTE. *Materials in shoes. Volume 3, constituting part of the training course for retail shoe salesmen. Boston, 1920. 190 pp.*

SOUTHWESTERN INTERSTATE COAL OPERATORS' ASSOCIATION. *The strike history of district No. 14 of Kansas from April 1, 1916, to December 31, 1919. Kansas City, 1920. 31 pp.*

STARR, E. B. *Excessive mortality from influenza-pneumonia among bituminous coal miners of Ohio in 1918. In American Journal of Public Health, Vol. 10, No. 4. Chicago, April, 1920. Pp. 348-351.*

The author gives the following figures as illustrative of the excessive mortality from influenza-pneumonia among coal miners in Ohio:

The total deaths from all causes among Ohio coal miners in 1918 was 1,923, a rate of 19.2 per thousand employed, as against a total in 1917 of 571 deaths, or a rate of 11.1 per thousand employed. The latter rate is not far from that found by Hayhurst¹ among Illinois coal miners for the six and one-half year period, February 1, 1912, to July 21, 1918; namely, 10.8 per thousand employed.

Of 39,565 deaths from all causes among males 15 years of age and over, in Ohio in 1918 (excluding coal miners), 11,989, or 30.3 per cent. were due to influenza-pneumonia, whereas 458 deaths, or 4.7 per cent. of the total deaths among Ohio coal miners were due to influenza-pneumonia. Though these percentages certainly indicate a preponderance of influenza-pneumonia mortality among coal miners they do not in themselves represent the true relation when one considers the distortion resulting from the large mortality among miners due to deaths from violence. * * *. By eliminating this distortion, due to violence, the relation between influenza-pneumonia mortality percentages in coal miners and males of the State at large appears in a truer light. The percentage of total deaths due to influenza-pneumonia among coal miners is then 55.9 as against 33.1 among males of 15 years and over in the State at large.

¹ Hayhurst, E. R.: Report of the Health Insurance Commission, State of Illinois, May 1, 1919, pp. 376-402. *Journal of Industrial Hygiene*, 1, No. 7 (November), 1919, pp. 360-367.

If one may hazard the statement of a death rate from influenza-pneumonia among males of 15 years and over, in the State at large (excluding miners), based upon an estimate of 1,886,000 males, we may compute a rate of 635 per 100,000 as against a rate of 862.6 per 100,000 from the same cause among miners.

TIMKEN SERVICE BUREAU. *Industrial Department. Compromise methods of harmonizing the relations between workers and employers. A defense of premium and bonus plans of compensation.* Baltimore, Keyser Building, 1920. 10 pp.

TRADES UNION CONGRESS. *Parliamentary Committee. Trade-union movement and political issues.* London, 32, Eccleston Square, SW1. [1919.] 11 pp.

UNITED STATES STEEL CORPORATION. *Eighteenth annual report for the fiscal year ended December 31, 1919.* Hoboken, N. J. 1920. 52 pp.

VEILLER, LAWRENCE. *A model housing law. Revised edition.* New York, Russell Sage Foundation, 1920. 430 pp.

VERBAND DER GEMEINDE- UND STAATSARBEITER. *Protokoll der Verhandlungen der dritten Konferenz des Krankenpflege-, Massage- und Baderpersonals Deutschlands.* Berlin, 1920. 160 pp.

The minutes of the third conference of German hospital nurses and employees in massage and bathing establishments held at Jena. Nov. 30 and Dec. 1, 1919. The conference discussed the vocational training, the economic situation, and the organization of hospital nurses and the bill regulating their hours of labor.

WHITTAKER, CHARLES HARRIS. *The joke about housing.* Boston, Marshall Jones Company, 1920. ix, 233 pp.

This is a discussion of the housing problem not alone from the point of view of providing houses for the workers but also in relation to other problems related to the economic system, chiefly the question of land control.

ZENTRALVERBAND DEUTSCHER KONSUMVEREINE. *Jahrbuch. Siebzehnter Jahrgang, 1919. Hamburg, 1919. 2 vols. (1035, 1127 pp.).*

The yearbook of the Central Federation of German Consumers' Cooperative Societies for 1919, containing statistical data of the German cooperative movement, and particularly of the consumers' cooperative movement. Some of the data given are found in this issue of the MONTHLY LABOR REVIEW, pp. 132 to 135.

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